

**ARKANSAS
STATE BOARD OF HEALTH**

Radiation Control Programs

**RULES AND REGULATIONS
FOR
CONTROL OF SOURCES OF IONIZING RADIATION**

**Promulgated Under the Authority of Act 96 of 1913
and
Act 8 of the Second Extraordinary Session of 1961, As Amended**

This Revision Effective ~~November 30, 2014~~ March 1, 2016

By the Arkansas State Board of Health

**Arkansas Department of Health
Little Rock, Arkansas**

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Director**

RULES AND REGULATIONS FOR CONTROL OF SOURCES OF IONIZING RADIATION
DRAFT OF CHANGES – NEW SECTION 12 AND RELATED

**SECTION 2.
LICENSING OF RADIOACTIVE MATERIALS**

**PART C.
EXEMPTIONS**

Italics indicate changes noted in October 2014 proposed rule package for RH-302. Highlighted portion indicates changes due to current proposed rule package. (This affects RH-302. only.)

RH-302. Carriers.

Common and contract carriers, freight forwarders, ~~and~~ warehousemen, ~~and the U.S. Postal Service operating within this state~~ are exempt from ~~these the Regulations in this Section and Part I of Section 3, Part J of Section 3, and Sections 6 through 9, and Section 12 of these Regulations~~ and the requirements for a license set forth in the Act to the extent that they transport or store ~~sources of radiation~~ radioactive material in the regular course of ~~their~~ carriage for another or storage incident thereto.

**PART D.
LICENSES**

RH-404. General Requirements for the Issuance of Specific Licenses.

a. —A license application will be approved if the Department determines that:

- 1a. The applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with Section 3 of these Regulations in such a manner as to minimize danger to public health and safety or property;
- 2b. The applicant's proposed equipment, facilities and procedures are adequate to protect health and minimize danger to public health and safety or property;
- 3c. The issuance of the license will not be inimical to the health and safety of the public;
- 4d. The applicant satisfies any applicable special requirements contained in Section 2, Section 3, Sections 7, Section 8, and Section through 9, and Section 12 of these Regulations; and

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~~5e.~~ In the case of an application for a license to receive and possess radioactive material for the conduct of any activity which the Department determines will significantly affect the quality of the environment, the Director of the Arkansas Department of Health, or his/her designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Subpart A, “National Environmental Policy Act – Regulations Implementing Section 102(2),” of 10 CFR Part 51, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess radioactive material in such plant or facility. Commencement of construction as defined in RH-200. may include non-construction activities if the activity has a reasonable nexus to radiological safety and security.

~~b. Applications for exemptions.~~

~~The Department may, upon application therefore or upon its own initiative, grant such exemptions or exceptions from the requirements of these Regulations as it determines are authorized by law and will not result in undue hazard to public health and safety or to property.~~

~~c. Orders.~~

~~The Department may, by order, impose upon any licensee or registrant such requirements, issued in furtherance of these Regulations, as it deems appropriate or necessary to protect health or minimize danger to life or property.~~

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SECTION 3.
STANDARDS FOR PROTECTION AGAINST RADIATION

PART I.
LICENSES FOR INDUSTRIAL RADIOGRAPHY AND RADIATION SAFETY
REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS

RH-1800. **General Provisions.**

a. **Purpose and scope.**

1. The Regulations in this Part prescribe requirements for the issuance of licenses for the industrial use of sealed sources in industrial radiography and establish radiation safety requirements for persons utilizing sources of radiation for in industrial radiography. The requirements of this Part are in addition to and not in substitution for other applicable requirements of these Regulations. The regulations in this Part apply to all licensees or registrants who use sources of radiation for industrial radiography. Except for the regulations in this Part clearly applicable only to sealed radioactive sources - radiation machines, accelerators, and sealed radioactive sources are covered by this Part. The provisions of this Part do not apply to medical uses of sources of radiation.

b. **Scope.**

2. The requirements of this Part are in addition to, and not in substitution for, other applicable requirements of these Regulations. The Regulations in this Part apply to all licensees or registrants who use sources of radiation for industrial radiography. Except for the Regulations in this Part clearly applicable only to sealed radioactive sources - radiation machines, accelerators, and sealed radioactive sources are covered by this Part. The provisions of this Part are not applicable to systems designed exclusively for microscopic examination of material, e.g., x ray diffraction, spectroscopic and electron microscope equipment, or to systems for intentional exposure of humans to x-rays. In particular, requirements in Sections 1, 2, 3, 4, 6, and 12 of these Regulations apply to applicants, licensees, and registrants subject to this Part.

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SECTION 4.
TRANSPORTATION OF RADIOACTIVE MATERIALS

PART F.
OPERATING CONTROLS AND PROCEDURES

RH-3509. **Advance Notification of Shipment of Irradiated Reactor Fuel and Nuclear Waste.**

- b. ~~Advance notification is required under this section for shipments of irradiated reactor fuel in quantities less than that subject to advance notification requirements as described in 10 CFR Part 73.~~ 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 Section to be in Type B packaging for transportation;
 2. The licensed material is being transported to or across a State boundary in 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 A_1 value of the radionuclides as specified in Table A-1 of Appendix A to this Section for special form radioactive material;
 - A. 3000 times the A_2 value of the radionuclides as specified in Table A-1 of Appendix A to this Section for normal form radioactive material; or
 - C. 1000 TBq (27,000 Ci).

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SECTION 12.

**PHYSICAL PROTECTION OF CATEGORY 1 AND
CATEGORY 2 QUANTITIES OF RADIOACTIVE MATERIAL**

PART A.
GENERAL

RH-11000. Reserved.

RH-11001. **Purpose.**

This Section 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 Section. 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 Section authorizes possession of licensed material.

RH-11002. Reserved.

RH-11003. **Scope.**

- a. Parts B and C of this Section apply to any person who, under these Regulations, possesses or uses at any site, an aggregated category 1 or category 2 quantity of radioactive material.
- b. Part D of this Section applies to any person who:
 1. Transports or delivers to a carrier for transport in a single shipment, a category 1 or category 2 quantity of radioactive material, under these Regulations; 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.

RH-11004. Reserved.

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RH-11005. Definitions.

Access control - 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 - Act 8 of the Second Extraordinary Session of 1961, as amended.

Aggregated - 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 - Any state with which the Atomic Energy Commission or the U.S. Nuclear Regulatory Commission has entered into an effective agreement under subsection 274 b. of the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto. Non-agreement State means any other State.

Approved individual - An individual whom the licensee has determined to be trustworthy and reliable for unescorted access in accordance with Part B of this Section and who has completed the training required by RH-11043.c.

Background investigation - The investigation conducted by a licensee or applicant to support the determination of trustworthiness and reliability.

Carrier - 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.

Category 1 quantity of radioactive material - A quantity of radioactive material meeting or exceeding the category 1 threshold in Table 1 of Appendix A to this Section. This 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 - 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 Section. This 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.

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Diversions - The unauthorized movement of radioactive material subject to this Section 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 - 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 - 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.

Government agency - 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 issuing authority - The licensing agency that issued the license, i.e., the Department, the appropriate agency of an Agreement State, or the U.S. Nuclear Regulatory Commission.

Local law enforcement agency (LLEA) - 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 - 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 - A piece of equipment containing licensed radioactive material that is either mounted on wheels or casters, or 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 - 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.

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No-later-than arrival time - 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 six (6) hours after the estimated arrival time for shipments of category 2 quantities of radioactive material.

Person –

1. Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the U.S. Nuclear Regulatory Commission or the U.S. Department of Energy (except that the DOE shall be considered a person within the meaning of the regulations in 10 CFR chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the NRC 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
2. Any legal successor, representative, agent, or agency of the foregoing.

Reviewing official - 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 - 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 - 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 - 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 - 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.

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Telemetric position monitoring system - 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 - 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 - 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.

RH-11006. Reserved.

RH-11007. **Communications.**

Except where otherwise specified, all communications concerning these Regulations may be addressed to the Arkansas Department of Health, Radiation Control Section, 4815 West Markham Street, Slot # 30, Little Rock, Arkansas 72205-3867.

RH-11008. Reserved.

RH-11009. **Interpretations.**

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized as binding upon the Department.

RH-11010. Reserved.

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RH-11011. Specific Exemptions.

- a. The Department may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this Section as it determines are authorized by law and will not result in undue hazard to public health and safety or property, and are otherwise in the public interest.
- b. A licensee that possesses radioactive waste that contains category 1 or category 2 quantities of radioactive material is exempt from the requirements of Parts B, C, and D of this Section – 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 Section. 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.

RH-11012.- RH-11019. Reserved.

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PART B.
BACKGROUND INVESTIGATIONS AND ACCESS AUTHORIZATION PROGRAM

RH-11020. Reserved.

RH-11021. **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 Part.
2. An applicant for a new license and each licensee that would become newly subject to the requirements of this Part upon application for modification of its license shall implement the requirements of this Part, 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 this Part B shall implement the provisions of this Part B 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 must ensure that the individuals specified in paragraph c.1. of this section are trustworthy and reliable.

c. **Applicability.**

1. Licensees shall subject the following individuals to an access authorization program:
 - 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

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B. Reviewing officials.

2. Licensees need not subject the categories of individuals listed in RH-11029.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 needing access to safeguards information-modified handling under 10 CFR Part 73 in the access authorization program under this Part B.

RH-11022. Reserved.

RH-11023. Access Authorization Program Requirements.

a. Granting unescorted access authorization.

1. Licensees shall implement the requirements of this Part 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 RH-11043.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 must be taken by a law enforcement agency, Federal or State agencies that provide fingerprinting services to the public, or commercial fingerprinting services

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authorized by a State to take fingerprints. The licensee shall recertify that the reviewing official is deemed trustworthy and reliable every ten (10) years in accordance with RH-11025.

3. Reviewing officials must be permitted to have unescorted access to category 1 or category 2 quantities of radioactive material 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 material shall receive appropriate radiation safety training, initially and at a frequency not to exceed twelve (12) months. The licensee shall maintain records of the initial and refresher training for three (3) years from the date of the training.
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 RH-11029.a.

c. **Informed consent.**

1. Licensees may not initiate a background investigation without the informed and signed consent of the subject individual. This consent must 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 RH-11025.b. A signed consent must 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:

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- 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 Part 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 Part.
- 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 Part 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 investigation has been completed and the individual granted unescorted access authorization.

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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 seven (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 must include provisions for the notification of individuals who are denied unescorted access. The procedures must include provisions for the review, at the request of the affected individual, of a denial or termination of unescorted access authorization. The procedures must 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 Part 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 must be maintained by the licensee for a period of one (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

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original information, the FBI Identification Division makes any changes necessary in accordance with the information supplied by that agency. Licensees must provide at least ten (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 three (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 three (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 three (3) years after the record is superseded.**
- 3. The licensee shall retain the list of persons approved for unescorted access authorization for three (3) years after the list is superseded or replaced.**

RH-11024. Reserved.

RH-11025. 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 must encompass at least the seven (7) years preceding the date of the background investigation or since the individual's eighteenth birthday, whichever is shorter. The background investigation must include at a minimum:

- 1. Fingerprinting and an FBI identification and criminal history records check in accordance with RH-11027.;**

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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 RH-11031. 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 seven (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 Part must 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 the individual (e.g., seek references not supplied by the individual); and

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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 ten (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 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 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. Reinvestigations.

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 RH-11027. The reinvestigations must be completed within ten (10) years of the date on which these elements were last completed.

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RH-11026. Reserved.

RH-11027. 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 RH-11029. and those individuals grandfathered under RH-11025.b., each licensee subject to the provisions of this Part 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 U.S. Nuclear Regulatory Commission 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 Part, the Fingerprint Orders, or 10 CFR Part 73. An existing criminal history records check file may be transferred to

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the licensee asked to grant unescorted access in accordance with the provisions of RH-11031.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 one (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 Part 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 Part, licensees shall submit to the U.S. Nuclear Regulatory Commission, Director, Division of Facilities and Security, 11545 Rockville Pike, Rockville, Maryland 20852-2738, ATTN: Criminal History Program, Mail Stop T-03B46M, 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 1-301-415-7513, or by email to FORMS.Resource@nrc.gov. Guidance on submitting electronic fingerprints can be found at

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<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 1-301-415-7513.) Combined payment for multiple applications is acceptable. The U.S. Nuclear Regulatory Commission publishes the amount of the fingerprint check application fee on the NRC's public Web site. (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.

RH-11028. Reserved.

RH-11029. 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;

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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 must be provided to the licensee. The licensee shall retain this documentation for a period of three (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 must be provided to the licensee. The licensee shall retain the documentation for a period of three (3) years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

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- 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 five (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 must be provided to the licensee. The licensee shall retain this documentation for a period of three (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.

RH-11030. Reserved.

RH-11031. Protection of Information.

- a. Each licensee who obtains background information on an individual under this Part 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

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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 Part available for examination by an authorized representative of the Department to determine compliance with the regulations 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 three (3) years from the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material.

RH-11032. Reserved.

RH-11033. 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 Part 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, must be

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documented. Each review report must 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 must be maintained for three (3) years.

RH-11034.- RH-11039. Reserved.

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PART C.
PHYSICAL PROTECTION REQUIREMENTS DURING USE

RH-11040. Reserved.

RH-11041. **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 Part.
2. An applicant for a new license and each licensee that would become newly subject to the requirements of this Part upon application for modification of its license shall implement the requirements of this Part, 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 Part C shall provide written notification to the Department as specified in RH-11007. at least ninety (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 must include the program features, as appropriate, described in RH-11043., RH-11045., RH-11047., RH-11049., RH-11051., RH-11053., and RH-11055.

RH-11042. Reserved.

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RH-11043. General Security Program Requirements.

a. Security plan.

1. Each licensee identified in RH-11041.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 Part. The security plan must, at a minimum:
 - A. Describe the measures and strategies used to implement the requirements of this Part; and
 - B. Identify the security resources, equipment, and technology used to satisfy the requirements of this Part.
2. The security plan must 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 three (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 three (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 Part and the security plan will be met.
2. The implementing procedures and revisions to these procedures must be approved in writing by the individual with overall responsibility for the security program.

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3. The licensee shall retain a copy of the current procedure as a record for three (3) years after the procedure is no longer needed. Superseded portions of the procedure must be retained for three (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 must 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 must be commensurate with the individual's potential involvement in the security of category 1 or category 2 quantities of radioactive material.
3. Refresher training must be provided at a frequency not to exceed twelve (12) months and when significant changes have been made to the security program. This training must include:
 - A. Review of the training requirements of paragraph c. of this section and any changes made to the security program since the last training;

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- 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 three (3) years from the date of the training. The training records must 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 must 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 RH-11025.a.2. through a.7.
 - 4. Licensees need not subject the following individuals to the background investigation elements for protection of information:

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- A. The categories of individuals listed in RH-11029.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 RH-11025.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 seven (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 nonremovable electronic form must be password protected.
- 8. The licensee shall retain as a record for three (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.

RH-11044. Reserved.

RH-11045. LLEA Coordination.

- a. A licensee subject to this Part 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 must include:

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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 Part; 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 Department as specified in RH-11007. within three (3) business days if:
1. The LLEA has not responded to the request for coordination within sixty (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 must be kept for three (3) years.
- d. The licensee shall coordinate with the LLEA at a frequency not to exceed twelve (12) months and when changes to the facility design or operation adversely affect the potential vulnerability of the licensee's material to theft, sabotage, or diversion.

RH-11046. Reserved.

RH-11047. 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 must 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 must, at a minimum, allow unescorted access only to approved individuals through:
 1. Isolation of category 1 and category 2 quantities of radioactive

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- 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 natural 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 must be escorted by an approved individual when in a security zone.

RH-11048. Reserved.

RH-11049. **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 must 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

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- 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 Part shall also have a means to detect unauthorized removal of the radioactive material from the security zone. This detection capability must 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 must 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.

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

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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.

RH-11050. Reserved.

RH-11051. Maintenance and Testing.

- a. Each licensee subject to this Part 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 must be inspected and tested for operability and performance in accordance with manufacturer's specifications and at the manufacturer's suggested frequency. The licensee shall maintain documentation providing the manufacturer's specifications regarding inspections and testing as well as the recommended inspection and testing frequencies. If the manufacturer's specifications are unobtainable, documentation of the effort to obtain the specifications shall be maintained. If there is no manufacturer's suggested frequency, inspections and testing must be performed at a frequency not to exceed twelve (12) months.
- b. The licensee shall maintain a record of each maintenance, inspection, or testing activity for three (3) years. The record must include the date of the activity; what type of activity was performed; the equipment involved; the results of the activity; the name of the individual who conducted the activity; and what repair and/or maintenance, if any, was performed.

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RH-11052. Reserved.

RH-11053. **Requirements for Mobile Devices.**

Each licensee that possesses mobile devices containing category 1 or category 2 quantities of radioactive material must:

- 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.

RH-11054. Reserved.

RH-11055. **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 Part and that comprehensive actions are taken to correct any noncompliance that is identified. The review must 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, must be documented. Each review report must 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 three (3) years.

RH-11056. Reserved.

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RH-11057. **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 Department by telephone at 1-800-633-1735. In no case shall the notification to the Department be later than four (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 four (4) hours after notifying the LLEA, the licensee shall notify the Department by telephone at 1-800-633-1735.
- c. The initial telephone notification required by paragraph a. of this section must be followed within a period of thirty (30) days by a written report submitted to the Department by an appropriate method listed in RH-11007. The report must include sufficient information for Department analysis and evaluation, including identification of any necessary corrective actions to prevent future instances.

RH-11058.- RH-11069. Reserved.

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PART D.
PHYSICAL PROTECTION IN TRANSIT

RH-11070. Reserved.

RH-11071. **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 Department, U.S. Nuclear Regulatory Commission, or an Agreement State shall meet the license verification provisions listed below instead of those listed in RH-501.c.:

- a. Any licensee transferring category 1 quantities of radioactive material to a licensee of the Department, U.S. Nuclear Regulatory Commission, or an Agreement State, prior to conducting such transfer, shall verify with the NRC'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.
- b. Any licensee transferring category 2 quantities of radioactive material to a licensee of the Department, U.S. Nuclear Regulatory Commission, or an Agreement State, prior to conducting such transfer, shall verify with the NRC'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.
- c. 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 must 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 must 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.

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- d. The transferor shall keep a copy of the verification documentation as a record for three (3) years.

RH-11072. Reserved.

RH-11073. **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 RH-11075a. and e.; RH-11077.; RH-11079.a.1., b.1., and c.; and RH-11081.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 RH-11075.b. through e.; RH-11079.a.2., a.3., b.2., and c.; and RH-11081.b., d., f., g., and h. For those shipments of category 2 quantities of radioactive material that meet the criteria of RH-3509.b., the shipping licensee shall also comply with the advance notification provisions of RH-3509.
- c. The shipping licensee shall be responsible for meeting the requirements of this Part unless the receiving licensee has agreed in writing to arrange for the in-transit physical protection required under this Part.
- d. Each licensee that imports or exports category 1 quantities of radioactive material shall comply with the requirements for physical protection during transit contained in RH-11075.a.2. and e.; RH-11077.; RH-11079.a.1., b.1., and c.; and RH-11081.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 RH-11079.a.2., a.3., and b.2.; and RH-11081.b., d., f., g., and h. for the domestic portion of the shipment.

RH-11074. Reserved.

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RH-11075. 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. of this section, 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 three (3) years.

RH-11076. Reserved.

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RH-11077. Advance Notification of Shipment of Category 1 Quantities of Radioactive Material.

As specified in paragraphs a. and b. of this section, each licensee shall provide advance notification to the Department and to 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.

a. Procedures for submitting advance notification.

1. The notification must 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, is available on the U.S. Nuclear Regulatory Commission 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. The notification to the Department may be made by fax to 1-501-280-4407.
2. A notification delivered by mail must be postmarked at least seven (7) days before transport of the shipment commences at the shipping facility.
3. A notification delivered by any means other than mail must reach the Department at least four (4) days before the transport of the shipment commences and must reach the office of the governor or the governor's designee at least four (4) days before transport of a shipment within or through the State.

b. Information to be furnished in advance notification of shipment.

Each advance notification of shipment of category 1 quantities of radioactive material must contain the following information, if available at the time of notification:

1. The name, address, and telephone number of the shipper, carrier, and receiver of the category 1 radioactive material;
2. The license numbers of the shipper and receiver;

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3. A description of the radioactive material contained in the shipment, including the radionuclides and quantity;
4. The point of origin of the shipment and the estimated time and date that shipment will commence;
5. The estimated time and date that the shipment is expected to enter each State along the route;
6. The estimated time and date of arrival of the shipment at the destination; and
7. A point of contact, with a telephone number, for current shipment information.

c. Revision notice.

1. 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.
2. 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 paragraphs b. and c.1. of this section. The licensee shall also immediately notify the Department of any such changes.

d. 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. 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.

e. Records.

The licensee shall retain a copy of the advance notification and any revision and cancellation notices as a record for three (3) years.

f. Protection of information.

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State officials, State employees, and other individuals, whether or not licensees of the Department, the NRC, or of an Agreement State, who receive schedule information of the kind specified in RH-11077.b. shall protect that information against unauthorized disclosure as specified in RH-11043.d.

RH-11078. Reserved.

RH-11079. **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 must 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 must provide positive confirmation of the location, status, and control over the shipment. The movement control center must 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.

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- 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 must 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 must allow the shipper or transporter to identify when and where the package was last

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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 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 must 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.

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- 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.

RH-11080. Reserved.

RH-11081. **Reporting of Events.**

- a. The shipping licensee shall notify the appropriate LLEA and the Department (1-800-633-1735) within one (1) hour of its determination that a shipment of category 1 quantities of radioactive material is lost or missing. The appropriate LLEA would be the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by RH-11079.c., the shipping licensee will provide agreed upon updates to the Department on the status of the investigation.
- b. The shipping licensee shall notify the Department (1-800-633-1735) within four (4) hours of its determination that a shipment of category 2 quantities of radioactive material is lost or missing. 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 Department.
- 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

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licensee shall notify the Department (1-800-633-1735) 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.

- d. The shipping licensee shall notify the Department (1-800-633-1735) 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.
- e. The shipping licensee shall notify the Department (1-800-633-1735) and the LLEA as soon as possible upon recovery of any lost or missing category 1 quantities of radioactive material.
- f. The shipping licensee shall notify the Department (1-800-633-1735) as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material.
- g. The initial telephone notification required by paragraphs a. through d. of this section must be followed within a period of thirty (30) days by a written report submitted to the Department by an appropriate method listed in RH-11007. A written report is not required for notifications on suspicious activities required by paragraphs c. and d. of this section. The report must set forth the following information, as appropriate:
 - 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, theft, etc. 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 this type of event.
- h. Subsequent to filing the written report, the licensee shall also report, by an appropriate method listed in RH-11007., any additional substantive information on the event within thirty (30) days after the licensee learns of such information.

RH-11082.- RH-11099. Reserved.

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PART E.
[RESERVED]

RH-11100.- RH-11199. Reserved.

DRAFT

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PART F.
RECORDS

RH-11200. Form of Records.

Each record required by this Section must be legible throughout the retention period specified by each Department regulation. 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, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

RH-11201. Reserved.

RH-11202. Record Retention.

Licensees shall maintain the records that are required by the regulations in this Section for the period specified by the appropriate regulation. If a retention period is not otherwise specified, these records must be retained until the Department terminates the facility's license. All records related to this Section may be destroyed upon Department termination of the facility license.

RH-11203.- RH-11299. Reserved.

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PART G.
ENFORCEMENT

RH-11300. Inspections.

- a. Each licensee shall afford to the Department at all reasonable times opportunity to inspect category 1 or category 2 quantities of radioactive material and the premises and facilities wherein such radioactive material is used, produced, or stored.
- b. Each licensee shall make available to the Department for inspection, upon reasonable notice, records kept by the licensee pursuant to these Regulations.

RH-11301. Violations.

An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.

RH-11302.- RH-11999. Reserved.

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APPENDIX A TO SECTION 12

CATEGORY 1 AND CATEGORY 2 RADIOACTIVE MATERIALS

TABLE 1—CATEGORY 1 AND CATEGORY 2 THRESHOLDS

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 Section.

- I. 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 must 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 Section apply.
- II. 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 must be performed in metric values (i.e., TBq) and the numerator and denominator values must be in the same units.

R_1 = total activity for radionuclide 1
 R_2 = total activity for radionuclide 2
 R_N = total activity for radionuclide n

AR_1 = activity threshold for radionuclide 1
 AR_2 = activity threshold for radionuclide 2
 AR_N = activity threshold for radionuclide n

$$\sum_{1}^n \left[\frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1.0$$

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**SECTION 2.
LICENSING OF RADIOACTIVE MATERIALS**

**PART A.
GENERAL**

RH-100. **Authority.**

Act 8 of Second Extraordinary ~~Special~~ Session of 1961, as amended.

RH-102. **~~License Requirement~~ Purpose and Scope.**

- a. Section 2, Part I to Section 3, Part J to Section 3, and Sections 7 through 9 provide for the licensing of radioactive material. Except for persons exempt as provided in Part C to Section 2 and RH-750., no person shall manufacture, produce, transfer, receive, acquire, own, possess, or use radioactive material except as authorized in a specific or general license issued in accordance with these Regulations.^{1/}
- b. In addition to the requirements of this Section, all licensees, except as otherwise noted in these Regulations, are subject to the requirements of Section 3 and Section 4 of these Regulations as well as any regulations specific to the type of radioactive material or particle accelerator use. Licensees engaged in industrial radiographic operations are subject to the requirements in Part I to Section 3; licensees engaged in well logging and subsurface tracer studies are subject to the requirements in Part J to Section 3; licensees using Naturally Occurring Radioactive Material (NORM) are subject to the requirements in Section 7; licensees using irradiators are subject to the requirements in Section 8; and licensees using radionuclides in the healing arts are subject to the requirements in Section 9. Particle accelerators are licensed pursuant to Section 6, with use requirements found in Sections 6 and 11.

RH-104. **Communications.**

Except where otherwise specified, All communications concerning these Regulations ~~shall~~ may be addressed to the Arkansas Department of Health, Radiation Control Section ~~Chief~~, 4815 West Markham Street, ~~Mail~~ Slot # 30, Little Rock, Arkansas 72205-3867.

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RH-105. Interpretations.

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized as binding upon the Department.

RH-105~~6~~.- RH-199. Reserved.

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PART B.
DEFINITIONS

RH-200. **Definitions.**

Act - Act 8 of Second Extraordinary ~~Special~~ Session of 1961, as amended.

Agreement State - Any state with which the Atomic Energy Commission or the U.S. Nuclear Regulatory Commission has entered into an effective agreement under ~~sub~~Section 274 b. of the Atomic Energy Act of 1954 (68 Stat. 919), as amended (73 Stat. 689) including any amendments thereto. Non-agreement State means any other State.

Becquerel (Bq) – One becquerel is equal to one disintegration per second (dps).

Curie (Ci) – One curie is that amount of radioactive material which disintegrates at the rate of 37 billion atoms per second.

Government agency - 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.

Person - ~~Any individual, corporation, partnership, firm, agency, political subdivision of this state, any other state or political subdivision or agency thereof and any legal successor, representative, agent or agency of the foregoing, other than the U.S. Nuclear Regulatory Commission and other federal government agencies.~~

1. Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the U.S. Nuclear Regulatory Commission or the U.S. Department of Energy (except that the DOE shall be considered a person within the meaning of the regulations in 10 CFR chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the NRC 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

2. Any legal successor, representative, agent, or agency of the foregoing.

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Principal activities - Activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

Special nuclear material -

1. Plutonium, Uranium-233, Uranium enriched in the isotope 233 or in the isotope 235, and any other material that the U.S. Nuclear Regulatory Commission, pursuant to the provisions of Section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material, or
2. Any material artificially enriched by any of the foregoing but does not include source material.

Special nuclear material in quantities not sufficient to form a critical mass - Uranium enriched in the isotope 235 in quantities not exceeding 350 grams of contained Uranium-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 “1” (i.e., unity). For example, the following quantities in combination would not exceed the limitation and are within the formula, as follows:

$$\frac{175 \text{ (grams contained U-235)}}{350} + \frac{50 \text{ (grams U-233)}}{200} + \frac{50 \text{ (grams Pu)}}{200} = 1$$

Unrefined and unprocessed ore - 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.

**PART C.
EXEMPTIONS**

RH-300. **Unimportant Quantities of Source Material.**

- a. Any person is exempt from ~~these Regulations~~ this Section to the extent that such person receives, possesses, uses, ~~or owns, transfers, or delivers~~

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source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than 1/20 of one (1) percent (0.05%) of the mixture, compound, solution, or alloy.

- b. Any person is exempt from this ~~Regulation~~ Section to the extent that such person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material; provided that, except as authorized in a specific license, such person shall not refine or process such ore.
- c. 1. Any person is exempt from this ~~regulation~~ Section and Section 3 to the extent that such person receives, possesses, uses, or transfers:
- 1.A. Any ~~quantity~~ quantities of ~~T~~thorium contained in:
- A.i. Incandescent gas mantles;
- B.ii. Vacuum tubes;
- C.iii. Welding rods;
- D.iv. Electric lamps for illuminating purposes, provided that each lamp does not contain more than fifty (50) milligrams of ~~T~~thorium;
- E.v. Germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting, provided that each lamp does not contain more than two (2) grams of ~~T~~thorium;
- F.vi. Rare earth metals and compounds, mixtures, and products containing not more than 0.25% percent by weight ~~T~~thorium, ~~U~~ranium, or any combination of these; or
- G.vii. Personnel neutron dosimeters, provided that each dosimeter does not contain more than fifty (50) milligrams of ~~T~~thorium;

RH-300.c.1. (Cont'd)

- 2.B. Source material contained in the following products:
- A.i. Glazed ceramic tableware manufactured before August 27, 2013, provided that the glaze contains not more than twenty percent (20%) ~~percent~~ by weight source material;

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- ~~B.ii.~~ Piezoelectric ceramic containing not more than two percent (2%) ~~percent~~ by weight source material;
- iii. Glassware containing not more than two percent (2%) by weight source material or, for glassware manufactured before August 27, 2013, 10 percent (10%) by weight source material; but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass or ceramic used in construction; or
- iv. Glass enamel or glass enamel frit containing not more than ten percent (10%) by weight source material imported or ordered for importation into the United States, or initially distributed by manufacturers in the United States, before July 25, 1983;
- 3.C. Photographic film, negatives, and prints containing ~~U~~ranium or ~~T~~horium;
- 4.D. Any finished product or part fabricated of, or containing ~~T~~ungsten or ~~M~~agnesium-~~T~~horium alloys, provided that the ~~T~~horium content of the alloy does not exceed four percent (4%) ~~percent~~ by weight and that the exemption contained in this subparagraph RH-300.c.1.D. shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such product or part; and
- 5.E. Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles or stored or handled in connection with installation or removal of such counterweights, provided that:

 - A. ~~The counterweights are manufactured in accordance with a specific license issued by the Department, the U.S. Nuclear Regulatory Commission or any Agreement State authorizing distribution by the licensee pursuant to this subparagraph or equivalent regulations of the NRC or any Agreement State;~~
 - B.i. Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: “**DEPLETED URANIUM**”;^{2/}

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€.ii. Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement **“UNAUTHORIZED ALTERATIONS PROHIBITED”**,^{2/} and

Đ.iii. The exemption contained in ~~this subparagraph~~ RH-300.c.1.E. shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating or other covering;

RH-300.c.1. (Cont'd)

6.F. ~~Uranium used as shielding constituting part of any shipping container which is conspicuously and legibly impressed with the legend “CAUTION – RADIOACTIVE SHIELDING – URANIUM” and which meets the specifications for containers for radioactive materials prescribed by Section 173.426 or 173.428 of 49 CFR Part 173 of the regulations published by the U.S. Department of Transportation.~~

Natural or depleted uranium metal used as shielding constituting part of any shipping container, provided that:

i. The shipping container is conspicuously and legibly impressed with the legend “CAUTION - RADIOACTIVE SHIELDING - URANIUM”; and

ii. The uranium metal is encased in mild steel or equally fire resistant metal of minimum wall thickness of one-eighth inch (3.2 mm);

7.G. ~~Thorium or uranium contained in or on finished optical lenses and mirrors, provided that each lens or mirror does not contain more than thirty (30%) ten percent (10%) by weight of Thorium or uranium or, for lenses manufactured before August 27, 2013, 30 percent (30%) by weight of thorium; and that the exemption contained in this subparagraph RH-300.c.1.G. shall not be deemed to~~ does not authorize either:

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- A.i. The shaping, grinding, or polishing of such lens or mirror or manufacturing processes other than the assembly of such lens or mirror into optical systems and devices without any alteration of the lens or mirror; or
- B.ii. The receipt, possession, use, or transfer of uranium or Thorium contained in contact lenses, or in spectacles, or in eyepieces in binoculars or other optical instruments;
8. ~~Uranium contained in detector heads for use in fire detection units, provided that each detector head contains not more than 0.005 microcuries of Uranium.~~
- 9.H. Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:
- A.i. The ~~Thorium~~ is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide); and
- B.ii. The ~~Thorium~~ content in the nickel-thoria alloy does not exceed four percent (4%) ~~percent~~ by weight.
- d.2. The exemptions contained in RH-300.c.1. ~~shall not be deemed to do not authorize the manufacture, processing or production of any of the products described herein.~~
3. No person may initially transfer for sale or distribution a product containing source material to persons exempt under RH-300.c.1., or equivalent regulations of the Nuclear Regulatory Commission or of an Agreement State, unless authorized by a license issued under 10 CFR 40.52 to initially transfer such products for sale or distribution.
- (i) Persons initially distributing source material in products covered by the exemptions in RH-300.c.1. before August 27, 2013, without specific authorization may continue such distribution for 1 year beyond this date. Initial distribution may also be continued until the NRC takes final action on a pending application for license or license amendment to specifically authorize distribution submitted no later than 1 year beyond this date.

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- (ii) Persons authorized to manufacture, process, or produce these materials or products containing source material by the Department or any Agreement State, and persons who import finished products or parts, for sale or distribution must be authorized by a license issued under 10 CFR 40.52 for distribution only and are exempt from the requirements of Section 3 and RH-404.a. and b.

RH-304. **Other Specific Exemptions.**

The Department may, upon application ~~therefore~~ of any interested person or upon its own initiative, grant such exemptions ~~or exceptions~~ from the requirements of ~~these Regulations~~ the regulations in this Section as it determines are authorized by law and will not result in undue hazard to public health and safety or property, and are otherwise in the public interest.

**PART D.
LICENSES**

RH-401. **General Licenses - Source Material.**

a. Small quantities of source material.

- a.1. ~~A general license is hereby issued authorizing use and transfer of not more than fifteen (15) pounds of source material at any one time by persons in the following categories:~~
1. ~~Pharmacists using the source material solely for the compounding of medicinals;~~
 2. ~~Physicians using the source material for medicinal purposes;~~
 3. ~~Persons receiving possession of source material from pharmacists and physicians in the form of medicinals or drugs;~~
 4. ~~Commercial and industrial firms and research, educational and medical institutions for research, development, educational or commercial purposes; provided, that no person shall, pursuant to this general license, receive more~~

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~~than a total of 150 pounds of source material in any one (1) calendar year.~~

A general license is hereby issued authorizing commercial and industrial firms; research, educational, and medical institutions; and Federal, State, and local government agencies to receive, possess, use, and transfer uranium and thorium, in their natural isotopic concentrations and in the form of depleted uranium, for research, development, educational, commercial, or operational purposes in the following forms and quantities:

- A. No more than 1.5 kg (3.3 lb) of uranium and thorium in dispersible forms (e.g., gaseous, liquid, powder, etc.) at any one time. Any material processed by the general licensee that alters the chemical or physical form of the material containing source material must be accounted for as a dispersible form. A person authorized to possess, use, and transfer source material under paragraph a.1.A. may not receive more than a total of 7 kg (15.4 lb) of uranium and thorium in any one calendar year. Persons possessing source material in excess of these limits as of *[the effective date of these regulations]*, may continue to possess up to 7 kg (15.4 lb) of uranium and thorium at any one time for one year beyond this date, or until the Department takes final action on a pending application submitted on or before *[the effective date of these regulations plus one year]*, for a specific license for such material; and receive up to 70 kg (154 lb) of uranium or thorium in any one calendar year until *[December 31 of the year after the regulations become effective]*, or until the Department takes final action on a pending application submitted on or before *[the effective date of these regulations plus one year]*, for a specific license for such material; and
- B. No more than a total of 7 kg (15.4 lb) of uranium and thorium at any one time. A person authorized to possess, use, and transfer source material under paragraph a.1.B. may not receive more than a total of 70 kg (154 lb) of uranium and thorium in any one calendar year. A person may not alter the chemical or physical form of the source material possessed under paragraph a.1.B. unless it is accounted for under the limits found in paragraph a.1.A.; or
- C. No more than 7 kg (15.4 lb) of uranium, removed during the treatment of drinking water, at any one time. A person may not remove more than 70 kg (154 lb) of uranium from

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drinking water during a calendar year under paragraph a.1.C.; or

D. No more than 7 kg (15.4 lb) of uranium and thorium at laboratories for the purpose of determining the concentration of uranium and thorium contained within the material being analyzed at any one time. A person authorized to possess, use, and transfer source material under paragraph a.1.D. may not receive more than a total of 70 kg (154 lb) of source material in any one calendar year.

2. Any person who receives, possesses, uses, or transfers source material in accordance with the general license in paragraph a. of this section:

A. Is prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as may be authorized by the Department in a specific license.

B. Shall not abandon such source material. Source material may be disposed of as follows:

i. A cumulative total of 0.5 kg (1.1 lb) of source material in a solid, non-dispersible form may be transferred each calendar year, by a person authorized to receive, possess, use, and transfer source material under this general license to persons receiving the material for permanent disposal. The recipient of source material transferred under the provisions of paragraph a.2.B.i. is exempt from the requirements to obtain a license under this Section to the extent the source material is permanently disposed. This provision does not apply to any person who is in possession of source material under a specific license issued pursuant to these Regulations; or

ii. In accordance with RH-1400.

C. Is subject to the provisions in RH-102., 104., 105., 200., 1100., 1511.; RH-409.a. through d.; RH-500. and 501.; RH-1502.e. through g., 600. through 602.; RH-416.; and RH-700.

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- D. 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 frame specified in the request. If the person cannot provide the requested information within the allotted time, the person shall, within that same time period, request a longer period to supply the information by providing the Department a written justification for the request;
- E. Shall not export such source material except in accordance with 10 CFR Part 110.
3. Any person who receives, possesses, uses, or transfers source material in accordance with paragraph a. of this section shall conduct activities so as to minimize contamination of the facility and the environment. When activities involving such source material are permanently ceased at any site, if evidence of significant contamination is identified, the general licensee shall notify the Department in writing about such contamination and may consult with the Department as to the appropriateness of sampling and restoration activities to ensure that any contamination or residual source material remaining at the site where source material was used under this general license is not likely to result in exposures that exceed the limits in RH-1216.
- b.4. Any ~~P~~ persons who receives, possesses, uses or transfers source material pursuant to in accordance with the general license issued in RH-401.a. granted in paragraph a. of this section are is exempt from the provisions of Section 3 of these Regulations to the extent that such receipt, possession, use, ~~or~~ and transfer is are within the terms of such this general license; provided, except that such person shall comply with the provisions of RH-1216. and RH-1400. to the extent necessary to meet the provisions of paragraphs a.2.B. and a.3. of this section. ~~h~~However, that this exemption shall does not be deemed to apply to any such person who is also in possession of source material under holds a specific license issued pursuant to these Regulations.
5. No person may initially transfer or distribute source material to persons generally licensed under paragraph a.1.A. or a.1.B. of this section, or equivalent regulations of the Nuclear Regulatory Commission or of an Agreement State, unless authorized by a specific license issued in accordance with RH-405.b.1. or equivalent provisions of the NRC or of an Agreement State. This prohibition does not apply to analytical laboratories returning processed samples to the client who initially provided the sample.

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Initial distribution of source material to persons generally licensed by paragraph a.1. of this section before [the effective date of these regulations], without specific authorization may continue for 1 year beyond this date. Distribution may also be continued until the Department takes final action on a pending application for license or license amendment to specifically authorize distribution submitted on or before August 27, 2014.

RH-401. (Cont'd)

e.b. Receipt of title to source material.

A general license is hereby issued authorizing the receipt of title to source material without regard to quantity. This general license does not authorize any person to receive, possess, deliver, use, or transfer source material.

c. Certain industrial products or devices.

1. A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with the provisions of paragraphs c.2. through c.5. of this section, depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

2. The general license in paragraph c.1. of this section applies only to industrial products or devices which have been manufactured or initially transferred either in accordance with a specific license issued to the manufacturer of the products or devices pursuant to RH-405.a.1. or in accordance with a specific license issued to the manufacturer by the Nuclear Regulatory Commission or an Agreement State which authorizes manufacture of the products or devices for distribution to persons generally licensed by the NRC or an Agreement State.

3. A. Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by paragraph c.1. of this section shall file Department form "Registration Certificate - Use of Depleted Uranium Under General License" with the General License Registration Program, Radiation Control Section, Arkansas Department of Health. The form shall be submitted within 30 days after the first receipt or acquisition of such depleted uranium. Persons possessing depleted uranium pursuant to the general license in paragraph c.1. of this section as of [the effective date of these regulations] shall register the

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depleted uranium with the Department on or before [the effective date of these regulations plus one year]. The general licensee shall furnish on the form the following information and such other information as may be required by the form:

- i. Name and address of the general licensee;
- ii. A statement that the general licensee has developed and will maintain procedures designed to establish physical control over the depleted uranium described in paragraph c.1. of this section and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and
- iii. Name and title, address, and telephone number of the individual duly authorized to act for and on behalf of the general licensee in supervising the procedures identified in paragraph c.3.A.ii. of this section.

B. The general licensee possessing or using depleted uranium under the general license established by paragraph c.1. of this section shall report in writing to the Department any changes in information originally furnished by the licensee in Department form "Registration Certificate - Use of Depleted Uranium Under General License." The report shall be submitted within 30 days after the effective date of such change.

4. A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph c.1. of this section:

A. Shall not introduce such 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;

B. Shall not abandon such depleted uranium;

C. Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provisions of Part E to

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Section 2 and RH-1400. In the case where the transferee receives the depleted uranium pursuant to the general license established by paragraph c.1. of this section, the transferor shall furnish the transferee a copy of paragraph c. of this section and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License." In the case where the transferee receives the depleted uranium pursuant to a general license of the Nuclear Regulatory Commission or an Agreement State that is equivalent to paragraph c., the transferor shall furnish the transferee a copy of paragraph c. and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License" accompanied by a note explaining that use of the product or device is regulated by the governing agency, the agency who has jurisdiction where the product or device will be in use, under requirements substantially the same as those in paragraph c.; and

D. Shall report in writing to the Department, within 30 days of any transfer, the name and address of the person receiving the depleted uranium pursuant to such transfer.

5. Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by paragraph c.1. of this section is exempt from the requirements of Section 3 of these Regulations with respect to the depleted uranium covered by that general license.

RH-404. **General Requirements for the Issuance of Specific Licenses.**

a.——A license application will be approved if the Department determines that:

- 1a. The applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with Section 3 of these Regulations in such a manner as to minimize danger to public health and safety or property;
- 2b. The applicant's proposed equipment, facilities and procedures are adequate to protect health and minimize danger to public health and safety or property;
- 3c. The issuance of the license will not be inimical to the health and safety of the public;

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- 4d. The applicant satisfies any applicable special requirements contained in Section 2, Section 3, Sections 7, Section 8, and Section through 9, and Section 12 of these Regulations; and
- 5e. In the case of an application for a license to receive and possess radioactive material for the conduct of any activity which the Department determines will significantly affect the quality of the environment, the Director of the Arkansas Department of Health, or his/her designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to Subpart A, “National Environmental Policy Act – Regulations Implementing Section 102(2),” of 10 CFR Part 51, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess radioactive material in such plant or facility. Commencement of construction as defined in RH-200. may include non-construction activities if the activity has a reasonable nexus to radiological safety and security.

b. ~~Applications for exemptions.~~

~~The Department may, upon application therefore or upon its own initiative, grant such exemptions or exceptions from the requirements of these Regulations as it determines are authorized by law and will not result in undue hazard to public health and safety or to property.~~

c. ~~Orders.~~

~~The Department may, by order, impose upon any licensee or registrant such requirements, issued in furtherance of these Regulations, as it deems appropriate or necessary to protect health or minimize danger to life or property.~~

RH-405. **Special Requirements for the Issuance of Certain Specific Licenses.**

a. ~~d. Deleted.~~

a. **Licensing of the manufacture and initial transfer of industrial products and devices containing depleted uranium.**

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1. Special requirements for issuance of specific licenses under RH-405.a.1.

- A. An application for a specific license to manufacture industrial products and devices containing depleted uranium, or to initially transfer such products or devices, for use pursuant to RH-401.c. or equivalent regulations of the Nuclear Regulatory Commission or an Agreement State, will be approved if:
- i. The applicant satisfies the general requirements specified in RH-404.;
 - ii. 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 in one (1) year a radiation dose in excess of ten percent (10%) of the annual limits specified in RH-1200.a.; and
 - iii. 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.
- B. In the case of an industrial product or device whose unique benefits are questionable, the Department will approve an application for a specific license under this paragraph 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.
- C. The Department may deny an applicant for a specific license under this paragraph if the end uses of the industrial product or device cannot be reasonably foreseen.

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2. Conditions of specific licenses issued pursuant to RH-405.a.1.

Each person licensed pursuant to RH-405.a.1. shall:

- A. Maintain the level of quality control required by the license in the manufacture of the industrial product or device, and in the installation of the depleted uranium into the product or device;
- B. Label or mark each unit to:
 - i. Identify the manufacturer or initial transferor of the product or device and 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 NRC or of 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. i. Furnish a copy of the general license contained in RH-401.c. and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License" to each person to whom the licensee transfers depleted uranium in a product or device for use pursuant to the general license contained in RH-401.c.; or
 - ii. Furnish a copy of the general license contained in the NRC's or Agreement State's regulation equivalent to RH-401.c. and a copy of the NRC's or Agreement State's certificate, or alternately, furnish a copy of the general license contained in RH-401.c. and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License" to each person to whom the licensee transfers depleted uranium in a product or

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device for use pursuant to the general license of the NRC or an Agreement State. If a copy of the general license in RH-401.c. and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License" are furnished to such person, they shall be accompanied by a note explaining that use of the product or device is regulated by the NRC or an Agreement State, depending on which agency has jurisdiction where the product or device will be in use, under requirements substantially the same as those in RH-401.c.;

- E. i. Report to the Department all transfers of industrial products or devices to persons for use under the general license in RH-401.c. Such report shall identify each general licensee by name and address, an individual by name and title who may constitute a point of contact between the Department and 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 such a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under RH-401.c. during the reporting period, the report shall so indicate;
- ii. Report to the agency where the product or device will be in use, the NRC or an Agreement State, all transfers of industrial products or devices to persons for use under the general license in the NRC's or an Agreement State's regulations equivalent to RH-401.c. Such report shall identify each general licensee by name and address, an individual by name and title who may constitute a point of contact between the agency and 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 such product or device is transferred to the generally licensed person. If no transfers have been made to NRC general licensees or to general licensees within a particular

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Agreement State during the reporting period, this information shall be reported to the NRC or to the responsible Agreement State agency upon request of the appropriate governing agency; and

F. Keep records showing the name, address, and a point of contact for each general licensee to whom the licensee transfers depleted uranium in industrial products or devices for use pursuant to the general license provided in RH-401.c. or equivalent regulations of the NRC or an Agreement State. The records shall be maintained for three (3) years from the date of transfer and shall show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the report requirements of this paragraph.

b. Licensing of the initial transfer of source material for use under the “small quantities of source material” general license.

1. Special requirements for issuance of specific licenses under RH-405.b.1.

An application for a specific license to initially transfer source material for use under RH-401.a., or equivalent regulations of the Nuclear Regulatory Commission or an Agreement State, will be approved if:

- A. The applicant satisfies the general requirements specified in RH-404.; and
- B. The applicant submits adequate information on, and the Department approves the methods to be used for quality control, labeling, and providing safety instructions to recipients.

2. Conditions of specific licenses issued pursuant to RH-405.b.1.

- A. Each person licensed under RH-405.b.1. shall label the immediate container of each quantity of source material with the type of source material and quantity of material and the words, "RADIOACTIVE MATERIAL."
- B. Each person licensed under RH-405.b.1. shall ensure that the quantities and concentrations of source material are as labeled and indicated in any transfer records.

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C. Each person licensed under RH-405.b.1. shall provide the information specified in paragraph b.2.C. of this section to each person to whom source material is transferred for use under RH-401.a. or equivalent provisions in NRC or Agreement State regulations. This information must be transferred before the source material is transferred for the first time in each calendar year to the particular recipient. The required information includes:

- i. A copy of RH-401.a. and Part E to Section 2, or relevant equivalent regulations of the NRC or an Agreement State; and
- ii. Appropriate radiation safety precautions and instructions relating to handling, use, storage, and disposal of the material.

D. Each person licensed under RH-405.b.1 shall report transfers as follows:

i. File a report with the Department. The report shall include the following information:

- (a). The name, address, and license number of the person who transferred the source material;
- (b). For each general licensee under RH-401.a. or equivalent NRC or Agreement State provisions to whom greater than 50 grams (0.11 lb) of source material has been transferred in a single calendar quarter, the name and address of the general licensee to whom source material is distributed; a responsible agent, by name and/or position and phone number, of the general licensee to whom the material was sent; and the type, physical form, and quantity of source material transferred; and
- (c). The total quantity of each type and physical form of source material transferred in the reporting period to all such generally licensed recipients.

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- ii. File a report with the NRC and each responsible Agreement State agency that identifies all persons, operating under provisions equivalent to RH-401.a., to whom greater than 50 grams (0.11 lb) of source material has been transferred within a single calendar quarter. The report shall include the following information specific to those transfers made to NRC jurisdiction or to the Agreement State being reported to:
- (a). The name, address, and license number of the person who transferred the source material;
- (b). The name and address of the general licensee to whom source material was distributed; a responsible agent, by name and/or position and phone number, of the general licensee to whom the material was sent; and the type, physical form, and quantity of source material transferred; and
- (c). The total quantity of each type and physical form of source material transferred in the reporting period to all such generally licensed recipients within NRC jurisdiction or within the Agreement State, as appropriate.
- iii. Submit each report by January 31 of each year covering all transfers for the previous calendar year. If no transfers were made to persons generally licensed under RH-401.a. or equivalent NRC or Agreement State provisions during the current period, a report shall be submitted to the Department indicating so. If no transfers have been made to NRC general licensees or to general licensees within a particular Agreement State during the reporting period, this information shall be reported to the NRC or to the responsible Agreement State agency upon request of the appropriate governing agency.
- E. Each person licensed under RH-405.b.1. shall maintain all information that supports the reports required by this paragraph concerning each transfer to a general licensee for

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a period of three (3) years after the event is included in a report to the Department, the NRC, or to an Agreement State agency.

c. – d. Reserved.

e. **Licensing of the manufacture or initial transfer of devices to persons generally licensed under RH-402.a. ...**

RH-405.

f. **~~Licensing of the use of sealed sources in industrial radiography.~~**

~~A specific license for use of sealed sources in industrial radiography will be issued only if:~~

1. ~~— The applicant satisfies the general requirements specified in Part D, RH-404.; and~~

2. ~~— The applicant will have an adequate program for training radiographers and radiographers' assistants and submits to the Department a schedule or description of such program which specifies the:~~

~~A. — Initial training;~~

~~B. — Periodic training;~~

~~C. — On the job training;~~

~~D. — Means to be used by the licensee to determine the radiographer's knowledge and understanding of, and ability to comply with, Department Regulations and licensing requirements and the operating and emergency procedures of the applicant; and~~

~~E. — Means to be used by the licensee to determine the radiographer's assistant's knowledge and understanding of, and ability to comply with, the operating and emergency procedures of the applicant; and~~

3. ~~— The applicant has established and submits to the Department satisfactory written operating and emergency procedures as described in RH-1802.e.; and~~

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4. ~~The applicant has established and submits to the Department a description of its internal audit program in accordance with RH-1802.b.; and~~
5. ~~The applicant submits to the Department a description of his overall organizational structure pertaining to the industrial radiography program including specified delegations of authority and responsibility for operation of the program; and~~

RH 405.f. (Cont'd)

6. ~~The applicant who desires to conduct his own leak tests has established adequate procedures to be followed in leak testing sealed sources for possible leakage and contamination and submits to the Department a description of such procedures including:~~
 - A. ~~Instrumentation to be used;~~
 - B. ~~Methods of performing test, e.g., points on equipment to be smeared and method of taking smear; and~~
 - C. ~~Pertinent experience of the person who will perform the tests.~~

Deleted. See RH-1800.b.2.

RH-406. **Special Requirements for Specific Licenses of Broad Scope.**

This section prescribes requirements for the issuance of specific licenses of broad scope for radioactive material (“broad licenses”) §§ and certain regulations governing holders of such licenses.

- a. The different types of broad licenses are set forth below: ...

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PART E.
TRANSFER OF MATERIAL

RH-500. Authorization for Transfer.

No licensee shall transfer radioactive material except as authorized pursuant to this Part.

RH-501. Conditions of Transfer.

- a. Except as otherwise provided in the license and subject to the provisions of paragraphs b. and c. of this section, Any licensee may transfer radioactive material, subject to acceptance by the transferee, to:
- a.1. The Department;
 - b.2. The U.S. Department of Energy, ~~the U.S. Nuclear Regulatory Commission or any successor thereto;~~
 - c.3. Any person exempt from these Regulations to the extent permitted under such exemption;
 - d.4. Any person ~~licensed~~ authorized to receive such material under terms of a general license or its equivalent or specific license or equivalent licensing document issued by the Department, the U.S. Nuclear Regulatory Commission (NRC), or any Agreement State or to any person otherwise authorized to receive such material by the Federal Government or any agency thereof, ~~or the Department, or any other state having an agreement with the U.S. Nuclear Regulatory Commission, pursuant to Section 274 of the Atomic Energy Act of 1954, as amended an Agreement State;~~ or
 - e.5. Any other person authorized by the Department in writing.
- f. b. Before transferring radioactive material to a specific licensee of the Department, the ~~U.S. Nuclear Regulatory Commission (NRC),~~ or an Agreement State, or to a general licensee who is required to register with the Department, the NRC, or an Agreement State prior to receipt of the radioactive material, the licensee 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.

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RH-501. (Cont'd)

~~g.c.~~ The following methods for the verification required by RH-501.~~f.b.~~ are acceptable:

1. The transferor may have in his possession, and read, a current copy of the transferee's specific license or registration certificate.
2. The transferor may have in his possession a written certification by the transferee that he 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 may accept oral certification by the transferee that he 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, that the oral certification is confirmed in writing within ten (10) days;
4. The transferor may obtain other sources of information compiled by a reporting service from official records of the Department, the NRC, or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registrations; or
5. When none of the methods of verification in RH-501.~~g.c.1. to~~ through 4. are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the Department, the NRC, or the licensing agency of an Agreement State that the transferee is licensed to receive the radioactive material.

RH-502. **Preparation of Material and Transport.**

Preparation for shipment and transport of radioactive material shall be in accordance with the provisions of RH-3004. of these Regulations.

RH-503.- RH-599. Reserved.

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PART F.
RECORDS, INSPECTIONS, AND TESTS

RH-600. Records.

- a. Each person who receives ~~a source of radiation~~ radioactive material pursuant to a license ~~or registration~~ under issued pursuant to the regulations in this Section, Part I to Section 3, Part J to Section 3, and Sections 6, 7, 8, and 9 of these Regulations shall keep records showing the receipt, transfer, and disposal of ~~such sources of radiation~~ the radioactive material as follows:
1. The licensee ~~or registrant~~ shall retain each record of receipt of radioactive material ~~or a source of ionizing radiation~~ as long as the material ~~or source~~ is possessed and for three (3) years following transfer or disposal of the material ~~or source of radiation~~.
 2. The licensee ~~or registrant~~ who transferred the material ~~or source of radiation~~ shall maintain each record of transfer for three (3) years after each transfer unless a specific requirement in another part of these Regulations dictates otherwise.
 3. The licensee ~~or registrant~~ who disposed of the material ~~or source of radiation~~ shall retain each record of disposal of radioactive material ~~or source of radiation~~ until the Department terminates each license ~~or registration~~ that authorizes disposal of the material ~~or source of radiation~~.
 4. If radioactive material is combined or mixed with other licensed material and subsequently treated in a manner that makes direct correlation of a receipt record with a transfer, export, or disposition record impossible, the licensee may use evaluative techniques (such as first-in-first-out) to make the records that are required by this Section account for 100 percent (100%) of the material received.
- b. ~~Each~~ The licensee or registrant shall retain each record that is required by the regulations in this Section, Part I to Section 3, Part J to Section 3, and Sections 6, 7, 8, and 9 of these Regulations or by license condition for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, the record must be retained until the Department terminates

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each license ~~or registration~~ that authorizes the activity that is subject to the recordkeeping requirement.

RH-600. (Cont'd)

- c.
 - 1. Records which must be maintained pursuant to this Section, Part I to Section 3, Part J to Section 3, and Sections ~~6~~, 7, 8, and 9 of these Regulations may be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Department regulations. 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, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee ~~or registrant~~ shall maintain adequate safeguards against tampering with and loss of records.
 - 2. If there is a conflict between the Department's regulations in this Section, Part I to Section 3, Part J to Section 3, and Sections ~~6~~, 7, 8, and 9 of these Regulations, license condition, or other written Department approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this Section, Part I to Section 3, Part J to Section 3, and Sections ~~6~~, 7, 8, and 9 of these Regulations for such records shall apply unless the Department, pursuant to RH-304., has granted a specific exemption from the record retention requirements specified in the regulations in this Section, Part I to Section 3, Part J to Section 3, and Sections ~~6~~, 7, 8, and 9 of these Regulations.
- d. Prior to license termination, each licensee authorized to possess radioactive material with a half-life greater than 120 days, in an unsealed form, shall forward the following records to the Department:
 - 1. Records of disposal of licensed material made under RH-1401., RH-1402., a previous RH-1403. that authorized certain burials^{11/}, RH-1404., RH-1405., RH-1408.; and
 - 2. Records required by RH-1500.c.2.D.
- e. If licensed activities are transferred or assigned in accordance with RH-409.b., each licensee authorized to possess radioactive material, with a half-life greater than 120 days, in an unsealed form, shall transfer the

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following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

1. Records of disposal of licensed material made under RH-1401., RH-1402., a previous RH-1403. that authorized certain burials^{11/}, RH-1404., RH-1405., RH-1408.; and
 2. Records required by RH-1500.c.2.D.
- f. Prior to license termination, each licensee shall forward the records required by RH-409.h.7. to the Department.

RH-601. **Inspections.**

- a. Each licensee shall afford, ~~at all reasonable times,~~ to the Department at all reasonable times opportunity to inspect radioactive materials and the ~~installation premises and facilities~~ wherein such radioactive materials ~~are~~ is used or stored.
- b. Each licensee shall make available to the Department for inspection, upon reasonable notice, records kept by the licensee pursuant to these Regulations.

**PART G.
ENFORCEMENT**

RH-700. a. **Violations.**

~~Any person who violates any of the provisions of the Act or rules, regulations or orders in effect pursuant thereto, of the Department, shall, upon conviction thereof, be punished by a fine of not less than one hundred dollars (\$100.00) nor more than two thousand dollars (\$2,000.00) or by imprisonment for not more than six (6) months or be both fined and imprisoned.~~

An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.

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b. **Impounding.**

Sources of radiation shall be subject to impounding pursuant to Section 5 of these Regulations.

**PART H.
RECIPROCITY**

RH-751. **Additional Requirements.**

The Department may, by rule, regulation, or order, impose upon any licensee such requirements in addition to those established in ~~these Regulations~~ the regulations in this Section as it deems appropriate or necessary to minimize danger to public health and safety or property.

FOOTNOTES TO SECTION 2

^{1/} Attention is directed to the fact that regulation by the State 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 and to 10 CFR Part 150 of the Commission's regulations.

^{2/} The requirements specified in RH-300.c.5.B. and C. 300.c.1.E.i. and ii. need not be met by counterweights manufactured prior to December 31, 1969, provided that such counterweights are impressed with the legend, "**CAUTION : RADIOACTIVE MATERIAL - URANIUM**," as previously required by these Regulations.

^{11/} ~~Authority to transfer possession or control by the manufacturer, processor or producer of any equipment, device, commodity or other product containing source or byproduct material whose subsequent possession, use, transfer and disposal by all other persons are exempted from regulatory requirements may be obtained only from the Department.~~

A previous RH-1403. permitted certain burials of small quantities of licensed materials in soil before January 1, 1983, without specific Department authorization. As of January 1, 1983, these burials had to receive specific approval by the Department, in accordance with the revised RH-1403. Disposal by burial in soil came to be regulated under RH-1401.

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SECTION 3.
STANDARDS FOR PROTECTION AGAINST RADIATION

PART A.
GENERAL

RH-1003. **Communications.**

Except where otherwise specified, All communications concerning these Regulations ~~should~~ may be addressed to the Arkansas Department of Health, Radiation Control Section Chief, 4815 West Markham Street, Mail Slot # 30, Little Rock, Arkansas 72205-3867.

PART B.
DEFINITIONS

RH-1100. **Definitions.**

Agreement State - Any state with which the Atomic Energy Commission or the U.S. Nuclear Regulatory Commission has entered into an effective agreement under ~~sub~~Section 274 b. of the Atomic Energy Act of 1954 (68 Stat. 919), as amended (73 Stat. 689) including any amendments thereto. Non-agreement State means any other State.

Becquerel (Bq) – One becquerel is equal to one disintegration per second (dps).

Curie (Ci) – One curie is that amount of radioactive material which disintegrates at the rate of 37 billion atoms per second.

License - Except where otherwise specified, ~~means~~ a license issued by the Department in accordance with the regulations adopted by the Department pursuant to these Regulations.

Person - Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this State, any other State or political subdivision or agency thereof and any legal successor, representative, agent or agency of the foregoing, other than the U.S. Nuclear Regulatory Commission and other federal government agencies.

1. Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the U.S. Nuclear Regulatory Commission or the U.S. Department of Energy (except that the DOE shall be considered a person within the meaning of

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the regulations in 10 CFR chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the NRC 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

2. Any legal successor, representative, agent, or agency of the foregoing.

Special nuclear material -

1. Plutonium, Uranium-233, Uranium enriched in the isotope 233 or in the isotope 235, and any other material that the ~~Department~~ U.S. Nuclear Regulatory Commission, pursuant to the provisions of Section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material, or
2. Any material artificially enriched by any of the foregoing but does not include source material.

RH-1104. **Interpretations.**

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the ~~R~~regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized ~~to be~~ as binding upon the Department.

**PART D.
PRECAUTIONARY PROCEDURES**

RH-1303.

b. **Posting requirements.**

3. **Posting of Very High Radiation Areas.**

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 ~~(not required to use the word~~

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~~GRAVE, this may be omitted), VERY HIGH RADIATION AREA.”~~

PART F.
RECORDS, REPORTS, NOTIFICATIONS, AND TESTS

RH-1500. ...

h. Records of waste disposal.

1. Each licensee or registrant shall maintain records of the disposal of licensed materials made under RH-1401., RH-1402., a previous RH-1403. that authorized certain burials^{8/}, RH-1404., RH-1405., and RH-1408., and disposal by burial in soil, including burials authorized before January 28, 1981.^{8/}
2. The licensee or registrant shall retain the records required by paragraph h.1. of this section until the Department terminates each pertinent license requiring the record. Requirements for disposition of these records, prior to license termination, are located in RH-600.

RH-1509. **Reports of Individual Monitoring.**

- a. This section applies to each person licensed by the Department to:
1. Possess or use radioactive material for purposes of radiography pursuant to Part I of Section 3; or
 2. Possess or use at any time, for processing or manufacturing for distribution pursuant to Section 2 of these Regulations, radioactive material in quantities exceeding any one of the following quantities:

TABLE TO RH-1509.a.2.

Radionuclide	Quantity of Radionuclide^a in Curies
Cesium-137	1
Cobalt-60	1
Gold-198	100

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Iodine-131	1
Iridium-192	10
Krypton-85	1,000
Promethium-147	10
Technetium-99m	1,000

- ^a The Department may require as a license condition, or by rule, Regulation, or order pursuant to RH-404.e2001., reports from licensees who are licensed to use radionuclides not on this list, in quantities sufficient to cause comparable radiation levels.
- b. Each licensee in a category listed in RH-1509.a. shall complete an annual report of the results of individual monitoring carried out by the licensee for each individual for whom monitoring was required by RH-1302. during that year. The licensee may include additional data for individuals for whom monitoring was provided but not required. The licensee shall use Department Form Y (Appendix I to Section 3) or electronic media containing all the information required by Department Form Y.
- c. The licensee shall complete the report required by RH-1509.b., covering the preceding year, on or before May 31 of each year. The licensee shall retain the report and submit it, if requested, to the Arkansas Department of Health, Radiation Control Section Chief, 4815 West Markham Street, Mail Slot # 30, Little Rock, Arkansas 72205-3867.

PART I.

LICENSES FOR INDUSTRIAL RADIOGRAPHY AND RADIATION SAFETY
REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS

RH-1800. General Provisions.

a. Purpose and scope.

1. The Regulations in this Part prescribe requirements for the issuance of licenses for the industrial use of sealed sources in industrial radiography and establish radiation safety requirements for persons utilizing sources of radiation for in industrial radiography. The requirements of this Part are in addition to and not in substitution for other applicable requirements of these Regulations. The regulations in this Part apply to all licensees or registrants who use sources of radiation for industrial radiography. Except for the regulations in this Part clearly applicable only to sealed radioactive sources - radiation machines, accelerators, and

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sealed radioactive sources are covered by this Part. The provisions of this Part do not apply to medical uses of sources of radiation.

b. ~~Scope.~~

2. The requirements of this Part are in addition to, and not in substitution for, other applicable requirements of these Regulations. The Regulations in this Part apply to all licensees or registrants who use sources of radiation for industrial radiography. Except for the Regulations in this Part clearly applicable only to sealed radioactive sources—radiation machines, accelerators, and sealed radioactive sources are covered by this Part. The provisions of this Part are not applicable to systems designed exclusively for microscopic examination of material, e.g., x-ray diffraction, spectroscopic and electron microscope equipment, or to systems for intentional exposure of humans to x-rays. In particular, requirements in Sections 1, 2, 3, 4, 6, and 12 of these Regulations apply to applicants, licensees, and registrants subject to this Part.

RH-405.f.

b. Specific licensing provisions.

1. Application for a specific license.

A person, as defined in RH-1100., shall file an application for a specific license authorizing the use of sealed sources in industrial radiography in accordance RH-403. and RH-404.

2. ~~Licensing of the use of sealed sources in~~ Specific licenses for industrial radiography.

An application for a A specific license for the use of sealed sources licensed material in industrial radiography will be issued only approved if:

- 1.A. The applicant satisfies the general requirements specified in Part D, RH-404., as applicable, and any special requirements contained in this Part; and
- 2.B. The applicant will have submits an adequate program for training radiographers and radiographers' assistants and submits to the Department a schedule or description of such program which specifies the that meets the requirements of RH-1802.b.;

A. ~~Initial training;~~

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- ~~B. Periodic training;~~
- ~~C. On the job training;~~
- ~~D. Means to be used by the licensee to determine the radiographer's knowledge and understanding of, and ability to comply with, Department Regulations and licensing requirements and the operating and emergency procedures of the applicant; and~~
- ~~E. Means to be used by the licensee to determine the radiographer's assistant's knowledge and understanding of, and ability to comply with, the operating and emergency procedures of the applicant; and~~
- C. The applicant submits adequate procedures for verifying and documenting the certification status of radiographers and for ensuring that the certification of individuals acting as radiographers remains valid;
- ~~3.D. The applicant has established and submits to the Department satisfactory written operating and emergency procedures as described in RH-1802.e.; and~~
- ~~4.E. The applicant has established and submits to the Department a description of its internal audit a program for inspections of the job performance of each radiographer and radiographer's assistant at intervals not to exceed 6 months as described in accordance with RH-1802.b.5.; and~~
- ~~5.F. The applicant submits to the Department a description of his the applicant's overall organizational structure pertaining as it applies to the radiation safety responsibilities to the in industrial radiography program, including specified delegations of authority and responsibility for operation of the program; and~~
- G. The applicant submits the qualifications of the individual(s) designated as the Radiation Safety Officer as described in RH-1802.d.;
- ~~6.H. The applicant who desires intends to conduct collect his own leak tests samples of sealed sources or exposure devices containing depleted uranium (DU) shielding has established adequate described the procedures to be~~

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~~followed in leak testing sealed sources for possible leakage and contamination and submits to the Department a description of such procedures including for performing the sampling and the qualifications of the individual(s) authorized to do the sampling. 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:~~

~~A.i. Instrumentation to be used;~~

~~B.ii. Methods of performing test, e.g., points on equipment to be smeared and method of taking smear; and the analysis; and~~

~~C.iii. Pertinent experience of the person individual(s) who will perform the tests analyze the wipe samples.~~

~~I. The applicant who intends to perform calibrations of survey instruments and/or alarming ratemeters describes methods to be used and the experience of the individual(s) who will perform the calibrations. All calibrations must be performed according to the procedures described and at the intervals prescribed in RH-1801.e.3. and RH-1802.f.7.D.~~

~~J. The applicant identifies and describes the location(s) of all field stations and permanent radiographic installations; and~~

~~K. The applicant identifies the locations(s) where all records required by this Part and other Sections of these Regulations will be maintained.~~

c. **Definitions.** ...

PART J.
LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WIRELINE SERVICE
OPERATIONS AND SUBSURFACE TRACER STUDIES

RH-1991. **Applications for Specific Exemptions.**

The Department may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the Regulations in this Part as it determines are authorized by law and will not ~~endanger life or property~~

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or the common defense and security result in undue hazard to public health and safety or property, and are otherwise in the public interest.

**PART K.
EXEMPTIONS AND ADDITIONAL REQUIREMENTS**

~~RH 2000. RH 2001. Deleted. Refer to RH 404.b. and RH 404.c.~~

RH-2000. **Specific Exemptions.**

The Department may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this Section as it determines are authorized by law and will not result in undue hazard to public health and safety or property, and are otherwise in the public interest.

RH-2001. **Additional Requirements.**

The Department may, by rule, regulation, or order, impose upon any licensee such requirements in addition to those established in the regulations in this Section as it deems appropriate or necessary to minimize danger to public health and safety or property.

**PART L.
ENFORCEMENT**

RH-2110. **Violations.**

- a. ~~Any person who violates any of the provisions of the Act or rules, regulations or orders in effect pursuant thereto of the Department shall, upon conviction thereof, be punished by a fine of not less than one hundred dollars (\$100.00) nor more than two thousand dollars (\$2,000.00) or by imprisonment for not more than six (6) months or be both so fined and imprisoned.~~

An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or

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imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.

b. **Impounding.**

Sources of radiation shall be subject to impounding pursuant to Section 5 of these Regulations.

APPENDIX H TO SECTION 3

QUANTITIES^{a/} OF LICENSED ~~OR REGISTERED~~ MATERIAL REQUIRING LABELING
(In order of atomic number)

FOOTNOTES TO SECTION 3

^{8/} A previous RH-4071403, permitted certain burials of small quantities of licensed materials in soil before January-28 1, 1984³, without specific Department authorization. As of January 1, 1983, these burials had to receive specific approval by the Department, in accordance with the revised RH-1403. Disposal by burial in soil came to be regulated under RH-1401.

SECTION 4.
TRANSPORTATION OF RADIOACTIVE MATERIALS

PART A.
GENERAL

RH-3003. **Communications and Records.**

- a. Except where otherwise specified, All communications concerning these Regulations shall may be addressed to the Arkansas Department of Health, Radiation Control Section, 4815 West Markham Street, Slot # 30, Little Rock, Arkansas 72205-3867.

RH-3006. **Interpretations.**

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized as binding upon the Department.

RH-3006~~7~~.- RH-3099. Reserved.

PART B.
DEFINITIONS

RH-3100. **Definitions.**

Carrier - A person engaged in the transportation of passengers or property by land or water as a common, ~~or~~ contract, or private carrier, or by civil aircraft.

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**PART C.
EXEMPTIONS**

RH-3200. **Specific Exemptions.**

~~On application of any interested person or on its own initiative, the Department may grant any exemption from the requirements of the regulations in this Section that it determines is authorized by law and will not endanger life or property nor the common defense and security.~~

The Department may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this Section as it determines are authorized by law and will not result in undue hazard to public health and safety or property, and are otherwise in the public interest.

**PART G.
QUALITY ASSURANCE**

RH-3609.- RH-39699. Reserved.

**PART H.
ENFORCEMENT**

RH-3700. **Violations.**

a. An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.

b. **Impounding.**

Sources of radiation shall be subject to impounding pursuant to Section 5 of these Regulations.

RH-3701.- RH-3999. Reserved.

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SECTION 5.
RULES OF PRACTICE

PART A.
GENERAL

RH-4003. **Communications.**

- a. Except where otherwise specified, All communications concerning ~~this~~ these Regulations shall may be addressed to the Arkansas Department of Health, Radiation Control Section, 4815 West Markham Street, Mail Slot # 30, Little Rock, Arkansas 72205-3867.

RH-4004. ~~Reserved.~~

Interpretations.

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized as binding upon the Department.

SECTION 6.
LICENSES AND RADIATION SAFETY REQUIREMENTS
FOR PARTICLE ACCELERATORS

PART A.
GENERAL

RH-5004. **Communications.**

Except where otherwise specified, All communications concerning these Regulations shall may be addressed to the Arkansas Department of Health, Radiation Control Section, 4815 West Markham Street, Mail Slot # 30, Little Rock, Arkansas 72205-3867.

RH-5005. **Interpretations.**

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized as binding upon the Department.

RH-50056.- RH-5099. Reserved.

PART G.
EXEMPTIONS, ADDITIONAL REQUIREMENTS,
INSPECTIONS, AND TESTS

RH-5600. **Exemptions.**

- e. The Department may, upon application ~~therefor~~ of any interested person; or upon its own initiative, grant such exemptions ~~or exceptions~~ from the requirements of ~~these Regulations~~ the regulations in this Section as it determines are authorized by law and will not result in undue hazard to public health and safety or property, and are otherwise in the public interest.

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RH-5602. **Inspections.**

- a. Each licensee shall afford to the Department at all reasonable times opportunity to inspect sources of radiation and the premises and facilities wherein such sources of radiation are used or stored.
- b. Each licensee shall make available to the Department for inspection, upon reasonable notice, records ~~maintained~~ kept by the licensee pursuant to these Regulations.

**PART H.
ENFORCEMENT**

RH-5700. **Violations.**

- a. ~~Any person who violates any of the provisions of the Act or rules, regulations, or orders in effect pursuant thereto of the Department shall, upon conviction thereof, be punished by a fine not less than one hundred dollars (\$100.00) nor more than two thousand dollars (\$2,000.00) or by imprisonment for not more than six (6) months or be both so fined and imprisoned.~~
An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.
- b. **Impounding.**
Sources of radiation shall be subject to impounding pursuant to Section 5 of these Regulations.

SECTION 8.
LICENSES AND RADIATION SAFETY REQUIREMENTS FOR IRRADIATORS

PART A.
GENERAL

RH-7003. Communications.

Except where otherwise specified, all communications concerning these Regulations may be addressed to the Arkansas Department of Health, Radiation Control Section, 4815 West Markham Street, Slot # 30, Little Rock, Arkansas 72205-3867.

~~RH-7003.~~ RH-7004. Reserved.

RH-7005. Interpretations.

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the Regulations in this Section by any officer or employee of the Department, other than a written interpretation by the Department Director or designee, will be recognized to be as binding upon the Department.

PART B.
LICENSES

RH-7013. Specific Licenses for Irradiators.

The Department will approve an application for a specific license for the use of licensed material in an irradiator if the applicant meets the requirements contained in this section.

- a. The applicant shall satisfy the general requirements specified in RH-404.a.1-4d. of these Regulations and the requirements contained in this Section.

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RH-7017. **Applications for Specific Exemptions.**

- a. The Department may, upon application of any interested person or upon its own initiative, grant ~~any~~ such exemptions from the requirements of the regulations in this Section that as it determines are authorized by law and will not endanger life or property or the common defense and security result in undue hazard to public health and safety or property, and are otherwise in the public interest.

**PART G.
ENFORCEMENT**

RH-7091. **Violations.**

- a. ~~Any person who violates any of the provisions of the Act or rules, Regulations or orders in effect pursuant thereto of the Department shall, upon conviction thereof, be punished by a fine of not less than one hundred dollars (\$100.00) nor more than two thousand dollars (\$2,000.00) or by imprisonment for not more than six (6) months or be both so fined and imprisoned.~~

An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.

- b. **Impounding.**

Sources of radiation shall be subject to impounding pursuant to Section 5 of these Regulations.

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SECTION 9.
USE OF RADIONUCLIDES IN THE HEALING ARTS

PART A.
GENERAL

RH-8006. Communications.

Except where otherwise specified, all communications concerning these Regulations may be addressed to the Arkansas Department of Health, Radiation Control Section, 4815 West Markham Street, Slot # 30, Little Rock, Arkansas 72205-3867.

RH-8007. Interpretations.

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized as binding upon the Department.

RH-8006~~8~~. - RH-8009. Reserved.

RH-8026. Specific Exemptions.

The Department may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this Section 9 as it determines are authorized by law and will not endanger life or property or the common defense and security result in undue hazard to public health and safety or property, and are otherwise in the public interest.

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**PART B.
DEFINITIONS**

RH- 8100. **Definitions.**

Agreement State - Any state with which the Atomic Energy Commission or the U.S. Nuclear Regulatory Commission has entered into an effective agreement under ~~sub~~Section 274 b. of the Atomic Energy Act of 1954 (68 Stat. 919), as amended (73 Stat. 689) including any amendments thereto. **Non-agreement State** means any other State.

**PART D:
GENERAL TECHNICAL REQUIREMENTS**

RH-8420. **Release of Individuals Containing ~~Radioactive Drugs or Implants~~ Unsealed Radioactive Material or Implants Containing Radioactive Material.**

- a. ~~A licensee may authorize the release from its control of any individual who has been administered Iodine-131 as Sodium Iodide if:~~
1. ~~The total patient concentration has been determined to be 1.22 gigabecquerels (33 millicuries) or less; or~~
 2. ~~If the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed five (5) millisievert (0.5 rem) per year and criteria outlined in Arkansas² **Standard for Radiological Protection for Release of Patient Administered I-131 Sodium Iodide** have been met.~~
- b. ~~A licensee may authorize the release from its control of any individual who has been administered unsealed radioactive material (other than Iodine-131 as Sodium Iodide) 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 five (5) millisievert (0.5 rem) per year.~~

NOTE: ~~The current revision of NUREG-1556, Vol.9, "Consolidated Guidance About Medical Licenses," describes methods for calculating doses to other individuals and contains tables of activities not likely to cause doses exceeding 5 mSv (0.5 rem).~~

- a. A licensee may authorize the release from its control of any individual who has been administered unsealed radioactive material or implants

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containing radioactive material if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 0.5 rem (5 mSv) per year.

- e b. A licensee shall provide the released individual, or the individual's parent or guardian, with oral and 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 0.1 rem (1 mSv). ~~If the total effective dose equivalent to a breast-feeding infant or child could receive a radiation dose as a result of the release of the patient~~ exceed 0.1 rem (1 mSv) 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.
- d c. Release of the ~~patient individual~~ must shall be directly approved by an authorized user listed on the ~~Department~~ license, if the release requires a record under RH-8710. ~~This individual~~ The authorized user must be approved for the use of the type of radioactive material for which the patient individual being released has received.
- e d. ~~The licensee shall maintain a r~~Records of the basis for authorizing the release of an individual shall be retained in accordance with RH-8710.
- f e. ~~The licensee shall maintain a r~~Records of instructions provided to ~~a breast-feeding women~~ woman shall be retained in accordance with RH-8710.
- g. ~~Notwithstanding RH-8420.a., the licensee may be held financially responsible for the proper disposal of any individual's radioactive waste discovered in a solid waste stream that can be traced to the licensee.~~
- h. ~~The licensee shall immediately notify the Department in accordance with RH-8803. if a patient departs prior to an authorized release.~~
- i. ~~The licensee shall notify the Department in accordance with RH-8804:~~
1. ~~When they are aware that a patient containing radioactive material and who has been released in accordance with RH-8420. dies; and~~
 2. ~~If it is possible that any individual could receive exposures in excess of five (5) millisievert (500 mrem) as a result of the deceased's body.~~

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PART F:
UNSEALED RADIOACTIVE MATERIAL –
WRITTEN DIRECTIVE REQUIRED

RH-8552. Safety Precautions.

- a. For each patient or human research subject receiving radiopharmaceutical therapy and hospitalized for compliance with RH-8420., a licensee shall:
 1. Quarter the patient or the human research subject either in:
 - A. A private room with a private sanitary facility; or
 - B. A room, with a private sanitary facility, with another individual who also has received similar radiopharmaceutical therapy and who cannot be released in accordance with RH-8420.; and,
 2. Visibly post the patient's or the human research subject's room with a "Radioactive Materials" sign and 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
 3. Either 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 such material and items as radioactive waste.
- b. The Radiation Safety Officer, or his or her designee, and ~~the~~ an authorized user shall be notified immediately if the ~~hospitalized~~ patient or human research subject dies or has a medical emergency. ~~The licensee shall also notify the Department in accordance with RH-8804. if it is possible that any individual could receive exposures in excess of RH-1208. of these regulations as a result of the deceased's body.~~

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**PART G:
MANUAL BRACHYTHERAPY**

RH-8603. Safety Instruction.

In addition to the requirements of RH-2803. ~~of these regulations:~~

- a. The licensee shall provide radiation safety instruction, initially and at least annually, to personnel caring for patients or human research subjects that are undergoing implant therapy and cannot be released in accordance with RH-8420. Instruction must be commensurate with the duties of the personnel and shall include the following:
 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 RH-1208.a.1. ~~of these regulations;~~ and
 - B. Visitation authorized in accordance with RH-1208.c. ~~of these regulations;~~ 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 dies or has a medical emergency. ~~The licensee shall also notify the Department in accordance with RH-8804. if it is possible that any individual could receive exposures in excess of five (5) millisievert (500 mrem) as a result of the deceased's body.~~
- b. ~~A licensee shall retain a r~~Records of individuals receiving instruction shall be maintained in accordance with RH-8715.

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**PART M:
RECORDS**

RH-8710. **Records of the Release of Individuals Containing Unsealed Radioactive Material ~~Drugs~~ or Implants Containing Radioactive Material.**

- a. A licensee shall retain a record, signed by the authorized user, of the basis for authorizing the release of an individual pursuant to RH-8420.a., for three (3) years after the date of release, if the total effective dose equivalent is calculated by:
 - A. Using the retained activity rather than the activity administered;
 - B. Using an occupancy factor less than 0.25 at 1 meter;
 - C. Using the biological or effective half-life; or
 - D. Considering the shielding by tissue.
- b. A licensee shall retain a record, ~~for three (3) years after the date of release~~ that the instructions required by RH-8420.e.b. were provided to a breast-feeding woman if the radiation dose to the infant or child from continued breast-feeding could result in a total effective dose equivalent exceeding 0.1 rem (1 mSv).
- c. Records required by paragraphs a. and b. of this section shall be retained for three (3) years after the date of release of the individual.

**PART N:
REPORTS**

RH-8803. **~~Reports of Patient Departure Prior to Authorized Release.~~**

- a. ~~The licensee shall notify the Department by telephone immediately upon discovery that a patient or human research subject has departed from the licensee's facility without authorization under RH 8420.a.~~
- b. ~~The license shall submit a written report to the Department within thirty (30) days after discovery of the unauthorized departure. The written report must include:~~

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1. ~~_____ The licensee's name;~~
2. ~~_____ The date and time of the unauthorized departure;~~
3. ~~_____ The projected date and time when release would have occurred;~~
4. ~~_____ The address of the patient's or human research subject's home or anticipated destination following departure;~~
5. ~~_____ The radionuclide, chemical and physical form and calculated activity at time of release;~~
6. ~~_____ The apparent reason(s) for the departure prior to authorized release; and~~
7. ~~_____ A description of any changes in the licensee's patient release criteria or patient instructions that are designed to avoid a recurrence of such an event.~~

Deleted.

RH-8804. **~~Notification of Deceased Patients or Human Research Subjects Containing Radioactive Material.~~**

- a. ~~_____ The licensee shall notify the Department by telephone immediately upon discovery that a patient or human research subject containing radioactive material has died, and it is possible that any individual could receive exposures in excess of RH 1208. of these regulations as a result of the deceased's body.~~
- b. ~~_____ The licensee shall submit a written report to the Department within thirty (30) days after discovery that the patient or human research subject referenced in RH 8804.a. has died. The written report must include:~~
 1. ~~_____ The licensee's name;~~
 2. ~~_____ The date of death;~~
 3. ~~_____ The radionuclide, chemical and physical form and calculated activity at time of death; and~~
 4. ~~_____ The names (or titles) and address(es) of known individuals who might have received exposures exceeding five (5) millisieverts (500 mrem).~~

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Deleted.

RH-8805.- RH-89899. Reserved.

**PART O:
ENFORCEMENT**

RH-8900. Violations.

a. An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.

b. **Impounding.**

Sources of radiation shall be subject to impounding pursuant to Section 5 of these Regulations.

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SECTION 11.
THERAPEUTIC RADIATION MACHINES

PART A.
GENERAL

RH-10003. **Communications.**

Except where otherwise specified, all communications concerning these Regulations may be addressed to the Arkansas Department of Health, Radiation Control Section, 4815 West Markham Street, Slot # 30, Little Rock, Arkansas 72205-3867.

RH-10004. **Interpretations.**

Except as specifically authorized by the Department in writing, no interpretations of the meaning of the regulations in this Section by an officer or employee of the Department other than a written interpretation by the Department Director or designee will be recognized as binding upon the Department.

RH-10005. **Specific Exemptions.**

The Department may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this Section as it determines are authorized by law and will not result in undue hazard to public health and safety or property, and are otherwise in the public interest.

RH-100036.- RH-10099. Reserved.

PART D.
TECHNICAL REQUIREMENTS

RH-10309.- RH-109399. Reserved.

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PART E.
[RESERVED]

RH-10400.- RH-10499. Reserved.

PART F.
ENFORCEMENT

RH-10500. **Violations.**

- a. An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a felony, misdemeanor, or crime and, upon conviction, may be punished by fine or imprisonment or both, as provided by law. Arkansas Code Annotated §20-21-204 describes criminal and civil penalties which may be assessed.

b. **Impounding.**

Sources of radiation shall be subject to impounding pursuant to Section 5 of these Regulations.

RH-10501.- RH-10999. Reserved.

FINANCIAL IMPACT STATEMENT

PLEASE ANSWER ALL QUESTIONS COMPLETELY

DEPARTMENT Arkansas Department of Health
DIVISION Center for Health Protection
PERSON COMPLETING THIS STATEMENT Angela Minden
(501) 661- **TELEPHONE NO.** 2528 (501) 280- **FAX NO.** 4407 **EMAIL:** angela.minden@arkansas.gov

To comply with Ark. Code Ann. § 25-15-204(e), please complete the following Financial Impact Statement and file two copies with the questionnaire and proposed rules.

SHORT TITLE OF THIS RULE Rules and Regulations for Control of Sources of Ionizing Radiation

1. Does this proposed, amended, or repealed rule have a financial impact? Yes ☒ No ☐
2. Is the rule based on the best reasonably obtainable scientific, technical, economic, or other evidence and information available concerning the need for, consequences of, and alternatives to the rule? Yes ☒ No ☐
3. In consideration of the alternatives to this rule, was this rule determined by the agency to be the least costly rule considered? Yes ☒ No ☐

If an agency is proposing a more costly rule, please state the following:

(a) How the additional benefits of the more costly rule justify its additional cost;
X

(b) The reason for adoption of the more costly rule;

(c) Whether the more costly rule is based on the interests of public health, safety, or welfare, and if so, please explain; and;

(d) Whether the reason is within the scope of the agency's statutory authority; and if so, please explain.

4. If the purpose of this rule is to implement a federal rule or regulation, please state the following:

(a) What is the cost to implement the federal rule or regulation?

Current Fiscal Year

General Revenue _____
Federal Funds _____
Cash Funds _____
Special Revenue _____
Other (Identify) _____

Next Fiscal Year

General Revenue _____
Federal Funds _____
Cash Funds _____
Special Revenue _____
Other (Identify) _____

Total 0

Total 0

(b) What is the additional cost of the state rule?

Current Fiscal Year

General Revenue _____
Federal Funds _____
Cash Funds _____
Special Revenue _____
Other (Identify) _____

Total 0

Next Fiscal Year

General Revenue _____
Federal Funds _____
Cash Funds _____
Special Revenue _____
Other (Identify) _____

Total 0

5. What is the total estimated cost by fiscal year to any private individual, entity and business subject to the proposed, amended, or repealed rule? Identify the entity(ies) subject to the proposed rule and explain how they are affected.

Current Fiscal Year

\$ 12068

Next Fiscal Year

\$ 10972

The proposed rule impacts any licensee that possesses an aggregated Category 1 or Category 2 quantity of radioactive material and any licensee that transports these materials using ground transportation. Estimated increased cost is dependent on a multitude of factors. Please see Written Findings.

6. What is the total estimated cost by fiscal year to state, county, and municipal government to implement this rule? Is this the cost of the program or grant? Please explain how the government is affected.

Current Fiscal Year

\$ 0

Next Fiscal Year

\$ 0

7. With respect to the agency's answers to Questions #5 and #6 above, is there a new or increased cost or obligation of at least one hundred thousand dollars (\$100,000) per year to a private individual, private entity, private business, state government, county government, municipal government, or to two (2) or more of those entities combined?

Yes ☒ No ☐

If YES, the agency is required by Ark. Code Ann. § 25-15-204(e)(4) to file written findings at the time of filing the financial impact statement. The written findings shall be filed simultaneously with the financial impact statement and shall include, without limitation, the following:

(1) a statement of the rule's basis and purpose;

(2) the problem the agency seeks to address with the proposed rule, including a statement of whether a rule is required by statute;

- (3) a description of the factual evidence that:
 - (a) justifies the agency's need for the proposed rule; and
 - (b) describes how the benefits of the rule meet the relevant statutory objectives and justify the rule's costs;
- (4) a list of less costly alternatives to the proposed rule and the reasons why the alternatives do not adequately address the problem to be solved by the proposed rule;
- (5) a list of alternatives to the proposed rule that were suggested as a result of public comment and the reasons why the alternatives do not adequately address the problem to be solved by the proposed rule;
- (6) a statement of whether existing rules have created or contributed to the problem the agency seeks to address with the proposed rule and, if existing rules have created or contributed to the problem, an explanation of why amendment or repeal of the rule creating or contributing to the problem is not a sufficient response; and
- (7) an agency plan for review of the rule no less than every ten (10) years to determine whether, based upon the evidence, there remains a need for the rule including, without limitation, whether:
 - (a) the rule is achieving the statutory objectives;
 - (b) the benefits of the rule continue to justify its costs; and
 - (c) the rule can be amended or repealed to reduce costs while continuing to achieve the statutory objectives.

WRITTEN FINDINGS
regarding April 2015 Proposed Revisions to
Rules and Regulations for Control of Sources of Ionizing Radiation
pursuant to A.C.A. §25-15-204(e)(4)

The Radiation Control Section offers the following written findings in conjunction with the Financial Impact Statement:

- 1) The potential financial impact regarding a portion of this rule package is due to a U.S. Nuclear Regulatory Commission amendment of its regulations to establish security requirements for the use and transport of Category 1 and Category 2 quantities of radioactive material. As an Agreement State, the State of Arkansas is required to have regulations that are compatible with NRC regulations. The NRC considers the aforementioned quantities of radioactive material to be risk significant and, therefore, to warrant additional protection. Category 1 and Category 2 thresholds are based on the quantities established by the International Atomic Energy Agency (IAEA) in its Code of Conduct on the Safety and Security of Radioactive Sources, which the NRC endorses.

The objective of this rule is to provide reasonable assurance of preventing theft or diversion of Category 1 and Category 2 quantities of radioactive material. The regulations also include security requirements for the transportation of irradiated reactor fuel that weighs 100 grams or less in net weight of irradiated fuel. The rule affects any licensee that possesses an aggregated Category 1 or Category 2 quantity of radioactive material, any licensee that transports these materials using ground transportation, and any licensee that transports small quantities of irradiated reactor fuel.

- 2) Pursuant to Section 274 of the Atomic Energy Act, 1954, the State of Arkansas, as a function of our Agreement State program, must have regulations that satisfy the compatibility and health and safety categories established in the NRC's Office of Nuclear Material Safety and Safeguards (NMSS) Procedure SA-200.
- 3) The NRC has long participated in efforts to ensure radioactive source protection and security. The terrorist attacks of September 11, 2001, heightened concerns about the use of risk-significant radioactive materials in a malevolent act. Such an attack is of particular concern because of the widespread use of radioactive materials in the United States by industrial, medical, and academic institutions. The theft or diversion of risk-significant quantities of radioactive materials could lead to their use in a radiological dispersal device (RDD) or a radiological exposure device (RED). Subsequently, the NRC issued various sets of orders to certain licensees, and, in turn, each Agreement State was required to issue legally binding requirements to impose enhanced security measures, identical to one of the NRC's sets of orders called the Increased Control Orders issued in 2005, for licensees under that State's regulatory jurisdiction. Agreement States also had to issue legally binding requirements consistent with a certain fingerprinting and FBI criminal history records checks order issued by the NRC in 2007.

The security requirements in the proposed rule are similar to the requirements imposed on licensees through the NRC's previously issued orders/Agreement State legally binding requirements. The NRC has determined that it is preferable to regulate through rulemaking rather than order because notice and comment rulemaking is an open and transparent process that facilitates public participation. In developing the final rule, the NRC considered, among other things, the various orders, lessons-learned during implementation, the recommendations from an Independent Review Panel and a Materials Working Group, and stakeholder comments. In NRC's final rule, some of the orders were deleted or revised, or new requirements were issued.

- 4) This rule would impose the minimum requirements that the NRC believes are necessary to adequately protect public health and safety. The rule provides some flexibility in the particular measures that a licensee can choose to employ in order to demonstrate compliance. Licensees have already implemented the bulk of the rule's requirements in response to previous NRC orders/Agreement State legally binding requirements. Some of the new proposed requirements may already be implemented if the licensee had chosen in the past to voluntarily enact the requirement, e.g., the developing of access authorization program or security program procedures.

The total cost to some licensees may be higher or lower than to others. The actual total cost depends on a multitude of factors including, but not limited to: the number of individuals granted unescorted access, the number of procedures that must be developed, the particular security measures that are used to meet the requirement, the extent of training to be given, and the number of Category 1 or Category 2 sources possessed and the location of the sources relative to other sources. Some of the actions required of the licensees may be conducted by lower paid employees, such as clerical staff. Also, over half of the Arkansas licensees affected by this portion of the proposed rule would be considered "out-of-state" licensees and therefore compliance with the NRC's amendment would have to be dually demonstrated. As such, certain costs/financial impact would be somewhat shared between States.

- 5) No alternatives to the proposed rule have been suggested as a result of public comment.
- 6) The State of Arkansas currently has no regulations specifically addressing the physical protection of Category 1 and Category 2 quantities of radioactive material.
- 7) Section 12 of the Rules and Regulations for Control of Sources of Ionizing Radiation regarding the physical protection of Category 1 and Category 2 quantities of radioactive material will be reviewed at least every ten years to determine, based upon the evidence, whether there remains a need for the rule.