



Notice of Intent to Adopt Rules

A copy of the proposed rules may be obtained at <https://rules.wyo.gov>

Revised August 2023

1. General Information

a. Agency/Board Name*		
b. Agency/Board Address	c. City	d. Zip Code
e. Name of Agency Liaison	f. Agency Liaison Telephone Number	
g. Agency Liaison Email Address		
h. Date of Public Notice	i. Comment Period End Date	
j. Public Comment URL or Email Address:		
k. Program		
Amended Program Name (if applicable):		

* By checking this box, the agency is indicating it is exempt from certain sections of the Administrative Procedure Act including public comment period requirements. Please contact the agency for details regarding these rules.

2. Legislative Enactment

For purposes of this Section 2, "new" only applies to regular non-emergency rules promulgated in response to a Wyoming legislative enactment not previously addressed in whole or in part by prior rulemaking and does not include rules adopted in response to a federal mandate.

a. Are these non-emergency regular rules new as per the above description and the definition of "new" in Chapter 1 of the Rules on Rules?

No. Yes. If the rules are new, please provide the Legislative Chapter Number and Year Enacted: Chapter: _____ Year: _____

3. Rule Type and Information

For purposes of this Section 3, "New" means an emergency or regular rule that has never been previously created.

a. Provide the Chapter Number, Title and Proposed Action for Each Chapter. Please use the "Additional Rule Information" form to identify additional rule chapters.

Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
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Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		



Additional Rule Information

Revised June 2020

Include this page only if needed.

1. General Information

a. Agency/Board Name*		
b. Agency/Board Address	c. City	d. Zip Code
e. Name of Agency Liaison	f. Agency Liaison Telephone Number	
g. Agency Liaison Email Address		
h. Program		
Amended Program Name (if applicable):		

2. Rule Type and Information, Cont.

a. Provide the Chapter Number, Title, and Proposed Action for Each Chapter.

Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
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Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		
Chapter Number:	Chapter Name:	<input type="checkbox"/> New <input type="checkbox"/> Amended <input type="checkbox"/> Repealed
Amended Chapter Name (if applicable):		

4. Public Comments and Hearing Information

a. A public hearing on the proposed rules has been scheduled. No. Yes. Please complete the boxes below.

Date:	Time:	City:	Location:
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b. What is the manner in which interested persons may present their views on the rulemaking action?

By submitting written comments to the Agency at the physical and/or email address listed in Section 1 above.

At the following URL: _____

A public hearing will be held if requested by 25 persons, a government subdivision, or by an association having not less than 25 members. Requests for a public hearing may be submitted:

To the Agency at the physical and/or email address listed in Section 1 above.

At the following URL: _____

c. Any person may urge the Agency not to adopt the rules and request the Agency to state its reasons for overruling the consideration urged against adoption. Requests for an agency response must be made prior to, or within thirty (30) days after adoption, of the rule, addressed to the Agency and Agency Liaison listed in Section 1 above.

5. Federal Law Requirements

a. These rules are created/amended/repealed to comply with federal law or regulatory requirements. No. Yes. Please complete the boxes below.

Applicable Federal Law or Regulation Citation:

Indicate one (1):

The proposed rules meet, but do not exceed, minimum federal requirements.

The proposed rules exceed minimum federal requirements.

Any person wishing to object to the accuracy of any information provided by the Agency under this item should submit their objections prior to final adoption to:

To the Agency at the physical and/or email address listed in Section 1 above.

At the following URL: _____

6. State Statutory Requirements

a. Indicate one (1):

The proposed rule change *MEETS* minimum substantive statutory requirements.

The proposed rule change *EXCEEDS* minimum substantive statutory requirements. Please attach a statement explaining the reason that the rules exceed the requirements.

b. The Agency has completed a takings assessment as required by W.S. 9-5-304. A copy of the assessment used to evaluate the proposed rules may be obtained:

By contacting the Agency at the physical and/or email address listed in Section 1 above.

At the following URL: _____

7. Additional APA Provisions

a. Complete all that apply in regards to uniform rules:

These rules are not impacted by the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-103(j).

The following chapters do not differ from the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-103(j):

(Provide chapter numbers)

These chapters differ from the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-103(j) (see Statement of Principal Reasons).

(Provide chapter numbers)

b. Checklist

The Statement of Principal Reasons is attached to this Notice and, in compliance with *Tri-State Generation and Transmission Association, Inc. v. Environmental Quality Council*, 590 P.2d 1324 (Wyo. 1979), includes a brief statement of the substance or terms of the rule and the basis and purpose of the rule.

If applicable: In consultation with the Attorney General's Office, the Agency's Attorney General representative concurs that strike and underscore is not required as the proposed amendments are pervasive (Chapter 3, *Types of Rules Filings*, Section 1, Proposed Rules, of the Rules on Rules).

8. Authorization

a. I certify that the foregoing information is correct.

Printed Name of Authorized Individual

Title of Authorized Individual

Date of Authorization

BEFORE THE
ENVIRONMENTAL QUALITY COUNCIL

STATE OF WYOMING

October 23, 2024



IN THE MATTER OF THE)
PROPOSED SOURCE MATERIAL) STATEMENT OF PRINCIPAL
PROGRAM RULES ADOPTION) REASONS (SOPR) FOR ADOPTION
LAND QUALITY DIVISION)

DOCKET #: 24-4103

Source Material Program Rules and Regulations, Chapters 1 through 9

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Introduction to Rule Package

Under the direction of the Legislature and the Governor, the state of Wyoming is establishing a Source Material Program (SMP) within the Department of Environmental Quality / Land Quality Division (DEQ LQD). The proposal is to amend the existing agreement with the U.S. Nuclear Regulatory Commission (NRC) to include the regulation of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content. The DEQ LQD would thereby assume regulatory authority from the NRC for the above mentioned source material. In order to amend the agreement with the NRC, Wyoming must have rules and regulations in place that meet NRC expectations to ensure safety of human health and the environment. This rule package is intended to meet those federal requirements. Where applicable the rules were incorporated by reference, but in some instances the Chapters were revised to fit State

needs.

Summary of Proposed New Chapters

Chapter 1 General Provisions- Set the framework in which the program will operate. It defines terms that are unique to the regulated community, sets standards on units to be used through the rules and correspondence, and provides for required exemptions from the program's regulatory authority.

Chapter 2 Inspections, Enforcement, and Penalties- Grants authority to inspect uranium recovery operations. Allows the Source Material Program to enforce and assess violations to its regulated community for non-compliance. In essence it extends those enforcement rights held by DEQ to the SMP.

Chapter 3 Radiation Protection Standards- Incorporates the applicable federal requirements in 10 C.F.R Part 20 by reference. The federal requirements set forth the radiological standards that are to be adopted by each Agreement State.

Chapter 4 Licensing Requirements for Source Material- Establishes the requirements necessary for an application for a Source Material License to be deemed acceptable by the program. Additionally, this Chapter incorporates the applicable portions of reclamation standards presented in 10 C.F.R Part 40 and Part 150 by reference.

Chapter 5 Notices, Instructions, and Reports to Workers- Incorporates applicable portions of the federal requirements in 10 C.F.R Part 19 by reference. The federal requirements outline the responsibilities of employers and the rights of radiation workers.

Chapter 6 Financial Assurance Requirements- Establishes the mechanisms to ensure that liabilities for operations are covered financially; such that if the State was to assume liability they would have the financial abilities to finish reclamation and remove the liability. In essence this chapter extends all those mechanisms that are allowed under current State statute W.S. §§ 35-11-417 through 418, except for the ability to self-bond.

Chapter 7 Fees- Sets forth the fee framework on how the program will be funded.

Chapter 8 Risk Informed, Performance Based Licensing and Inspection- Details the philosophy the program will try to maintain as it performs inspection and reviews license applications and amendments.

Chapter 9 Transportation of Radioactive Material- Incorporates applicable portions of the federal requirements in 10 C.F.R Part 71 by reference. The federal requirements outline the transportation requirements of licensees.

Summary of Advisory Board Meetings

The LQD introduced and presented draft proposed Source Material Program rules at three separate LQD Advisory Board meetings. These scoping meetings were held on September 21, 2023, December 14, 2023 and March 21, 2024. No written comments were received on the proposed rules during these three meetings. The regulations moved through the Land Quality Advisory Board with a few questions clarifying the Source Material Program and comments on compatibility from the NRC which were revised in the draft rules prior to the final Advisory Board meeting. Chapters 1 through 9 of the final draft Source Material Programs rules were presented to the LQD Advisory Board on June 20, 2024. Again, the LQD did not receive any written comments on the draft rules. The Land Quality Advisory Board unanimously recommended Chapters 1 through 9 for the Source Material Program proceed to formal rulemaking before the Environmental Quality Council.

Stringency Statement

The proposed nine chapters of rules for the new Source Material Program are no more stringent than the corresponding NRC regulations and are at least as effective as those regulations.

The authority to amend these rules is provided by Wyoming Statute (W.S.) §§ 35-11-112(a)(i), 35-11-114(b), 35-11-2001 and 35-11-2002(b).

CONCLUSION

The Environmental Quality Council, in accordance with the authority granted to it by W.S. § 35-11-112 as amended, and having complied with the provision of the Wyoming Administrative Procedures Act, find as follows:

1. These rules provide for the regulation of the processing of source material and extraction of mineral resources other than Uranium or Thorium. as defined in the Atomic Energy Act of 1954, as amended, in accordance with the requirements of W.S. 35-11-2001 and 2002.
2. These rules and regulations are as effective as those promulgated by the Nuclear Regulatory Commission pursuant to P.L. 83-703, as amended.
3. The Department of Environmental Quality, Land Quality Division, Source Material Rules and Regulations are necessary and appropriate to preserve and exercise the primary responsibilities and rights of the State of Wyoming; to retain for the State the control over its air, land, and water resources and secure cooperation between agencies of the State and Federal Government in carrying out the policy and purposes of the Environmental Quality Act.
4. These Land Quality Division Source Material Program Rules and Regulations are reasonable and necessary for the effectuation of the Wyoming Environmental Quality Act, W.S. § 35-11-101 through W.S. § 35-11-2004, as amended.
5. These Land Quality Division Source Material Program Rules and Regulations are necessary and appropriate to protect the public health, safety, welfare, and environment of the State of Wyoming.

Dated this _____ day of _____, 2024.

Environmental Quality Council

Chapter 1

General Provisions

Section 1. Authority.

(a) These rules and regulations are promulgated pursuant to the Wyoming Environmental Quality Act, Wyoming Statute (W.S.) § 35-11-2001 *et seq.* These rules and regulations are effective upon filing with the Secretary of State.

Section 2. Purpose.

(a) It is the purpose of these rules to state such requirements as shall be applied in the use of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content (referred to throughout these rules as licensed material) such that the Department can ensure the protection of the public health and safety to all persons at, or in the vicinity of, the place of use, storage, or disposal.

Section 3. Scope.

(a) Except as otherwise specifically provided, these rules apply to all persons who receive, possess, use, offer and receive for transfer, own, or acquire any source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content. For the purposes of these rules, the term “mineral resources” is defined in W.S. § 35-11-2001(a). Nothing in these rules shall apply to any person to the extent such person is subject to regulation not relinquished by the United States Nuclear Regulatory Commission (NRC). These rules do not govern the mining or removal of source material in its natural state or independent or commercial laboratory facilities that possess, use, or accept source material. These rules apply to laboratories located at facilities licensed under these regulations.

Section 4. Incorporation by Reference (IBR) of Code of Federal Regulations (C.F.R.)

(a) AVAILABILITY OF REFERENCED MATERIAL. The federal rules adopted by reference throughout these rules are maintained at the following locations:

(i) Electronic copies of the federal rules adopted by reference throughout these rules may be obtained from the U.S. Government Printing Office, <http://www.ecfr.gov>; and

(ii) Volumes of the federal rules adopted by reference throughout these rules are available for public inspection at the Wyoming Department of Environmental Quality, Source Material Program, 200 West 17th Street, Suite 10, Cheyenne, Wyoming 82002. Printed copies of the federal rules adopted by reference throughout these rules are also available at cost from the U.S. Government Printing Office, 732 North Capitol Street Northwest, Washington D.C. 20401 or at <http://bookstore.gpo.gov/catalog/laws-regulations/code-federal-regulations-cfrs-print>. Copies of the federal rules adopted by reference throughout these rules may be requested at cost through the Wyoming Department of Environmental Quality, which will order

the materials from the U.S. Government Printing Office.

Section 5. Definitions.

The following terms, as used in these rules and regulations shall, unless the context otherwise requires, have the following meanings:

(a) "Absorbed Dose" means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the rad and the gray (Gy).

(b) "Act" means Environmental Quality Act, W.S. § 35-11-103 *et seq.*

(c) "Action Limits" means the minimum and maximum values of a quality assurance measurement that can be interpreted as representing acceptable performance with respect to the parameter being tested. Values less than the minimum or greater than the maximum action limit or level indicate that corrective action must be taken. Action limits or levels are also sometimes called control limits or levels.

(d) "Activity" means the rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).

(e) "Adult" means an individual 18 or more years of age.

(f) "Agreement State" means a state with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under Section 274(b) of the Atomic Energy Act of 1954 (AEA), as amended (42 U.S.C. § 2021). Non-agreement State means any other State.

(g) "Airborne Radioactive Material" means a radioactive material dispersed in the air in the form of dusts, fumes, particulates, mists, vapors, or gases.

(h) "Airborne Radioactivity Area" means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exists in concentrations:

(i) In excess of the derived air concentrations (DACs), specified in 10 C.F.R. Part 20, Appendix B, or

(ii) To such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI), or 12 DAC hours.

(i) "Air-Purifying Respirator" means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

(j) "Alert" means events may occur, are in progress, or have occurred that could lead to a release of radioactive material but that the release is not expected to require a response by off-site response organizations to protect persons off-site.

(k) "Annual Limit on Intake (ALI)" means the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the reference man that would result in a committed effective dose equivalent of 5 rems (0.05 Sv) or a committed dose equivalent of 50 rems (0.5 Sv) to any individual organ or tissue. (ALI values for intake by ingestion and by inhalation of selected radionuclides are given in Table 1, Columns 1 and 2, of Appendix B to 10 CFR Part 20).

(l) "As Low as (is) Reasonably Achievable (ALARA)" means making every reasonable effort to maintain exposures to radiation as far below the dose limits as is practical, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

(m) "Assigned Protection Factor (APF)" means the expected workplace level of respiratory protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

(n) "Atmosphere-Supplying Respirator" means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARS) and self-contained breathing apparatus (SCBA) units.

(o) "Background Radiation" means radiation from:

(i) Cosmic sources;

(ii) Naturally occurring radioactive materials, including radon (except as a decay product of source or special nuclear material); and

(iii) Global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee.

(iv) Background radiation does not include radiation from source, byproduct, or special nuclear materials regulated by the Commission.

(p) "Becquerel (Bq)" means the SI unit of activity. One (1) becquerel is equal to one (1) disintegration or transformation per second.

(q) "Bioassay" means the determination of kinds, quantities or concentrations, and in some cases, the locations of radioactive material in the human body, whether by direct measurement (in vivo counting) or by analysis and evaluation of materials excreted or removed from the human body. For purposes of these rules, "radiobioassay" is an equivalent term.

(r) "Byproduct Material" is defined in W.S. § 35-11-103(j)(i).

- (s) "Calibration" means the determination of:
- (i) The response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or
 - (ii) The strength of a source of radiation relative to a standard.
- (t) "Class (or lung class or inhalation class)" means a classification scheme for inhaled material according to its rate of clearance from the pulmonary region of the lung. Materials are classified as D, W, or Y, which applies to a range of clearance half-times; for Class D (Days) of less than 10 days, for Class W (weeks) from 10 to 100 days, and Class Y (years) of greater than 100 days.
- (u) "Collective Dose" means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.
- (v) "Commencement of Construction" means taking any action defined as construction or any other activity at the site of a facility subject to these rules that has a reasonable nexus to radiological health or safety.
- (w) "Commission" means the U.S. Nuclear Regulatory Commission or its duly authorized representatives. "Nuclear Regulatory Commission" and "NRC" are equivalent terms.
- (x) "Committed Dose Equivalent ($H_{T,50}$)" means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.
- (y) "Committed Effective Dose Equivalent ($H_{E,50}$)" is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($H_{E,50} = \sum W_T H_{T,50}$).
- (z) "Constraint (dose constraint)" means a value above which specified licensee actions are required.
- (aa) "Contamination" means the presence of radioactive substance on a surface in quantities in excess of unrestricted release limits.
- (i) Fixed radioactive contamination means radioactive contamination that cannot be removed from a surface during normal conditions.
 - (ii) Non-fixed or removable radioactive contamination means radioactive contamination that can be removed from a surface during normal conditions.
- (ab) "Controlled Area" means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason.
- (ac) "Critical Group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(ad) "Curie" means the special unit of activity. One curie is equal to 3.7×10^{10} disintegrations per second which is equal to 3.7×10^{10} becquerels which is equal to 2.22×10^{12} disintegrations per minute.

(ae) "Declared Pregnant Woman" means a woman who has voluntarily informed the licensee, in writing, of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

(af) "Decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:

- (i) Release of property for unrestricted use and termination of the license; or
- (ii) Release of the property under restricted conditions and termination of the license.

(ag) "Deep Dose Equivalent (H_d)," which applies to external whole body exposure, means the dose equivalent at a tissue depth of 1cm (1000 mg/cm^2).

(ah) "Demand Respirator" means an atmosphere-supplying respirator that admits breathing air to the facepiece only when negative pressure is created inside the facepiece by inhalation.

(ai) "Department" means the State of Wyoming Department of Environmental Quality.

(aj) "Derived Air Concentration (DAC)" means the concentration of given radionuclide in air which, if breathed by reference man for a working year of 2,000 hours under conditions of light work (inhalation rate of 1.2 cubic meters of air per hour), results in an intake of 1 ALI. DAC values are given in 10 C.F.R. Part 20, Appendix B, Table 1 Column 3.

(ak) "Derived Air Concentration–Hour (DAC-Hour)" means the product of the concentration of radioactive material in air (expressed as a fraction or multiple of the derived air concentration for each radionuclide) and the time of exposure to that radionuclide, in hours. A licensee may take 2,000 DAC-hours to represent 1 ALI equivalent to a committed effective dose equivalent of 5 rems (0.05 Sv).

(al) "Discrete source" means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

(am) "Disposable Respirator" means a respirator for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent exhaustion, physical damage, or end of service life renders it unsuitable for use. Examples of this type of respirator are disposable half-mask respirators or disposable escape-only self-contained breathing apparatus (SCBA).

(an) "Distinguishable from Background" means that the detectable concentration of a

radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

(ao) "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent. For purposes of these rules, "radiation dose" is an equivalent term.

(ap) "Dose Equivalent (H_T)" means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the rem and sievert (Sv).

(aq) "Dose Limits" means the permissible upper bounds of radiation doses established in accordance with these rules. For purpose of these rules, "limits" is an equivalent term.

(ar) "Dosimetry Processor" means an individual or organization, that is National Voluntary Laboratory Accreditation Program (NAVLAP) approved, that processes and evaluates individual monitoring equipment in order to determine the radiation dose delivered to the equipment.

(as) "Effective Dose Equivalent (H_E)" means the sum of the products of the dose equivalent to the organ or tissue (H_T), and the weighting factor (W_T), applicable to each of the body organs or tissues that are irradiated ($H_E = \sum W_T H_T$).

(at) "Embryo/Fetus" means the developing human organism from conception until the time of birth.

(au) "Entrance or Access Point" means any location through which an individual could gain access to radiation areas or to licensed radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

(av) "Exclusive Use" means the sole use by a single consignor or a conveyance for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. The consignor and the carrier must ensure that any loading or unloading is performed by personnel having radiological training and resources appropriate for safe handling of the consignment. The consignor must issue specific instructions, in writing, for maintenance of exclusive use shipment controls, and include them with the shipping paper information provided to the carrier by the consignor.

(aw) "Exposure" means being exposed to ionizing radiation or to radioactive material. For purposes of these rules, this term is used as a verb.

(ax) "Exposure Rate" means the exposure per unit of time, such as roentgen per minute and milliroentgen per hour.

(ay) "External Dose" means that portion of the dose equivalent received from a source of radiation outside the body.

(az) "Extremity" means hand, elbow, arm below the elbow, foot, knee, and leg below the knee.

(ba) "Financial Assurance" means the method of assuring that sufficient funds will be available at the time of license termination and decommissioning of the facility to cover all costs associated with the decommissioning.

(bb) "Filtering Facepiece (dust mask)" means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, not equipped with elastomeric sealing surfaces and adjustable straps.

(bc) "Fit Factor" means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

(bd) "Fit Test" means the use of protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

(be) "Generally Applicable Environmental Radiation Standards" means standards issued by the U.S. Environmental Protection Agency under the authority of the AEA, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

(bf) "Helmet" means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

(bg) "High Radiation Area" means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv), in 1 hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

(bh) "Hood" means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

(bi) "Individual" means any human being.

(bj) "Individual monitoring" means:

(i) The assessment of dose equivalent by:

(A) Use of devices designed to be worn by an individual, or

(B) Survey data; or

(ii) The assessment of committed effective dose equivalent by:

(A) Bioassay, or

(B) By determination of the time-weighted air concentrations to which an individual has been exposed (i.e. DAC-hours).

(bk) "Individual Monitoring Devices" means devices designed to be worn by a single individual for the assessment of dose equivalent. For purposes of these rules, individual monitoring equipment and personnel monitoring equipment are equivalent terms. Examples of individual monitoring devices are film badges, thermoluminescence dosimeters (TLD's), pocket ionization chambers, and personal air sampling devices.

(bl) "Internal Dose" means that portion of the dose equivalent received from radioactive material taken into the body.

(bm) "Lens Dose Equivalent (LDE)" means the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm²).

(bn) "License" means a form of permission given by the Department to an applicant who has met the requirements for licensing set out in the Act and these rules.

(bo) "Licensee" means a person who is licensed by the Department in accordance with the Act and these rules.

(bp) "Licensed material" means source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content and the management and disposal of associated byproduct material received, possessed, used, transferred, or disposed of under a license issued by the Department.

(bq) "Limits (dose limits)" means the permissible upper bounds of radiation doses.

(br) "Loose Fitting Facepiece" means a respiratory inlet covering that is designed to form a partial seal with the face.

(bs) "Lost or Missing Licensed Material" means licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

(bt) "Member of the Public" means an individual except when that individual is receiving an occupational dose.

(bu) "Minor" means an individual less than 18 years of age.

(bv) "Monitoring" means the measurement of radiation levels, concentrations, surface area concentrations or quantities of radioactive material, and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these rules, radiation monitoring and radiation protection monitoring are equivalent terms.

(bw) "Nationally tracked source" is a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Appendix E of 10 C.F.R. Part 20. In this context a sealed source is defined as radioactive material that is sealed

in a capsule or closely bonded, in a solid form and which is not exempt from regulatory control. It does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet. Category 1 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 1 threshold. Category 2 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 2 threshold but less than the Category 1 threshold.

(bx) "Negative Pressure Respirator (tight fitting)" means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

(by) "Nonstochastic Effect" means health effects, the severity of which varies with the dose and for which a threshold is believed to exist. Radiation-induced cataract formation is an example of a nonstochastic effect (also called a deterministic effect). For the purposes of these rules deterministic effects are equivalent terms.

(ca) "Occupational Dose" means the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or to radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. An Occupational dose does not include doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released under 10 C.F.R. Part § 35.75, from voluntary participation in medical research programs, or as a member of the public.

(cb) "Operation" means all of the activities, equipment, premises, facilities, structures, roads, rights-of-way, waste and refuse areas, storage and processing areas, and shipping areas used in the process of excavating or removing overburden and minerals from the affected land or for removing overburden for the purpose of determining the location, quality or quantity of a natural, mineral deposit or for the reclamation of affected lands.

(cc) "Person" means an individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, municipality or any other political subdivision of the State, or any interstate body or any other legal entity and any legal successor, representative, agent, or agency of the foregoing.

(cd) "Physician" means a medical doctor or doctor of osteopathy licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to prescribe drugs in the practice of medicine.

(ce) "Positive Pressure Respirator" means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

(cf) "Powered air-purifying respirator (PAPR)" means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

(cg) "Pressure Demand Respirator" means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

(ch) "Principal Activities" as used in these rules, means 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

(ci) "Program" means the State of Wyoming's Source Material Program.

(cj) "Public Dose" means the dose received by a member of the public from exposure to radiation or to radioactive materials released by a licensee, or to any other source of radiation under the control of a licensee. Public dose does not include occupational dose or doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released in accordance with 10 C.F.R. § 35.75, or from voluntary participation in medical research programs.

(ck) "Qualitative Fit Test (QLFT)" means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to a test agent.

(cl) "Quality factor (Q)" means the modifying factor, listed in Tables 1 of Section 7 of this Chapter and Table 1004(b).2 of 10 CFR 20.1004, that is used to derive dose equivalent from absorbed dose.

(cm) "Quantitative Fit Test (QNFT)" means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

(cn) "Quarter" means a period of time equal to one-fourth of the year observed by the licensee (approximately 13 consecutive weeks), providing that the beginning of the first quarter in a year coincides with the starting date of the year and that no day is omitted or duplicated in consecutive quarters.

(co) "Radiation" means alpha particles, beta particles, gamma rays, x-rays, neutrons, high speed electrons, high speed protons, and other particles capable of producing ions. For purposes of these rules, ionizing radiation is an equivalent term. Radiation, as used in these rules, does not include non-ionizing radiation, such as radio or microwaves, visible, infrared, or ultraviolet light.

(cp) "Radiation Area" means an area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 mSv), in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

(cq) "Radiation Level" means the radiation dose-equivalent expressed in millisieverts per hour or mSv/h (millirems per hour or mrem/h).

(cr) "Radioactivity" means the transformation of unstable atomic nuclei by the emission of radiation.

(cs) "Reference Man" means a hypothetical aggregation of human physical and physiological characteristics arrived at by international consensus. These characteristics may be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base.

(ct) "Residual Radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 C.F.R. Part 20 which is incorporated by reference in Chapter 3 of these rules.

(cu) "Respiratory Protective Device" means an apparatus, such as a respirator, used to reduce the individual's intake of airborne radioactive materials.

(cv) "Restricted Area" means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.

(cw) "Roentgen (R)" means the special unit of exposure. One roentgen equals 2.58×10^{-4} coulombs per kilogram of air. *See* exposure, defined above.

(cx) "Sanitary Sewerage" means a system of public sewers carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned and operated by the licensee.

(cy) "Self-Contained Breathing Apparatus (SCBA)" means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

(cz) "Shallow Dose Equivalent (H_s)" which applies to the external exposure of the skin of the whole body or the skin of an extremity and is taken as the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm^2).

(da) "SI" means an abbreviation of the International System of Units.

(db) "Site Area Emergency" means events which may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by off-site organizations to protect persons off-site.

(dc) "Site boundary" means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee.

(dd) "Source material" is defined in W.S. § 35-11-103(j)(iii).

(de) "Specific Activity" means the radioactivity of the radionuclide per unit mass of the nuclide. The specific activity of a material in which the radionuclide is essentially uniformly distributed is the radioactivity per unit mass of material. The Specific Activity for Natural Uranium is 6.77×10^{-7} Ci per gram of U.

(df) "Special Nuclear Material" means:

(i) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the 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

(ii) Any material artificially enriched by any of the foregoing but does not include source material.

(dg) "Stochastic Effects" means health effects that occur randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose without threshold. Hereditary effects and cancer incidence are examples of stochastic effects.

(dh) "Supplied-Air Respirator (SAR)" means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

(di) "Survey" means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. When appropriate, such an evaluation includes physical survey of the location of radioactive material and measurements or calculations of levels of radiation, or concentrations or quantities of radioactive material present.

(dj) "Test" means the process of verifying compliance with an applicable rule.

(dk) "Tight Fitting Facepiece" means a respiratory inlet covering that forms a complete seal with the face.

(dl) "Total Effective Dose Equivalent (TEDE)" means the sum of the effective dose equivalent for external exposures and the committed effective dose equivalent for internal exposures.

(dm) "Unrefined and Unprocessed Ore" means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining. Processing does not include sieving or encapsulation of ore or preparation of samples for laboratory analysis.

(dn) "Unrestricted Area" means an area, to which access is neither limited nor controlled by the licensee. For purposes of these rules, "uncontrolled area" is an equivalent term.

(do) "Unrestricted Use" means that the facility area, or object may be used by individuals for any purpose without limit or control of the licensee.

(dp) "User seal check (fit check)" means an action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

(dq) "Very High Radiation Area" means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from a radiation source or 1 meter from any surface that the radiation penetrates.

(dr) "Waste" means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purpose of this definition, low-level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in this Chapter.

(ds) "Week" means seven consecutive days starting on Sunday.

(dt) "Weighting Factor (W_T)" for an organ or tissue (T) is the proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of W_T are:

Organ or Tissue	W_T
Gonads	0.25
Breasts	0.15
Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone Surfaces	0.03
Remainder	¹ 0.30
Whole Body	² 1.00

¹ 0.30 results from 0.06 for each 5 "remainder organs" (excluding the skin and the lens of the eye) that receive the highest doses.

² For the purposes of weighting the external whole body dose (for adding it to the internal dose), a single weighting factor, $W_T = 1.0$, has been specified. The use of weighting factors for external exposure will be approved on a case-by-case basis until such time as specific guidance is issued.

(du) "Whole Body" means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knees.

(dv) "Worker" means an individual engaged in work under a license issued by the Department and controlled by a licensee, but does not include the licensee.

(dw) "Working Level (WL)" means any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of 1.3×10^5 MeV of potential alpha particle energy. The short-lived radon daughters are: for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

(dx) "Working Level Month (WLM)" means an exposure to one working level for 170 hours. 2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month.

(dy) "Year" means the period of time beginning in January used to determine compliance with the provisions of these rules. The licensee may change the starting date of the year used to

determine compliance by the licensee provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

Section 6. Units of Exposure and Dose.

(a) As used in these rules, the unit of exposure is the coulomb per kilogram (C per kg). One roentgen is equal to 2.58×10^{-4} coulomb per kilogram of air.

(b) As used in these rules, the units of dose are:

(i) Gray (Gy) is the SI unit of absorbed dose. One gray is equal to an absorbed dose of one joule per kilogram. One gray equals 100 rad.

(ii) Rad is the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 erg per gram or 0.01 joule per kilogram. One rad equals 0.01 Gy.

(iii) Rem is the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor. One rem equals 0.01 Sv.

(iv) Sievert (Sv) is the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor. One Sv equals 100 rem.

(c) As used in these rules, the quality factors for converting absorbed dose to dose equivalent are shown in Table 1.

TABLE 1

Quality Factors and Absorbed Dose Equivalencies

Type of Radiation	Quality Factor (Q)	Absorbed Dose Equal to a Unit Dose Equivalent
X, gamma, or beta radiation and high-speed electrons	1	1
Alpha particles, multiple-charged particles, fission fragments and heavy particles of unknown charge	20	0.05
Neutrons of unknown energy	10	0.1
High energy protons	10	0.1

For the column in Table 1 labeled "Absorbed Dose Equal to a Unit Dose Equivalent," the absorbed dose in rad is equal to one rem or the absorbed dose in gray is equal to one Sv.

Section 7. Units of Radioactivity.

For purposes of these rules, activity is expressed in the SI unit of becquerel (Bq), or in the special unit of curie (Ci), or their multiples, or disintegrations or transformations per unit of time.

Section 8. Communication and Referenced Materials.

All communication and reports concerning parts of these rules, and application filed thereunder, should be addressed to the Department.

Section 9. Deliberate misconduct.

(a) No person may do any of the following:

(i) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant under these rules to be in violation of any rule or order of the Department; or any term, condition or limitation of any license issued by the Department under this Chapter; or

(ii) Deliberate misconduct by a person means an intentional act or omission that the person knows:

(A) Would cause a licensee to be in violation of any rule, regulation, or order; or any term, condition, or limitation issued by the Department; or

(B) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor or subcontractor of a licensee as mandated by the Department.

(b) A person who violates paragraph (a)(i) or (a)(ii) of this section may be subject to enforcement action in accordance with Chapter 2 of these rules.

(c) Deliberately submit to the Department any information that the person knows to be incomplete or inaccurate. This includes licensees, applicants, and contractors and subcontractors to licensees and applicants.

Section 10. Exemptions.

(a) The Department may upon application or upon its own initiative, grant such exemptions or exception from requirements as it determines are authorized by law and will not result in undue hazard to public health and safety or property. Provisions for exceptions are provided for in W.S. § 35-11-2003(c).

(b) Except to the extent that the Department of Energy's (DOE) facilities or activities, subject to licensing pursuant to Section 202 of the Energy Reorganization Act of 1974 (42 U.S.C. § 5842.), are involved, any prime contractor of the DOE is exempt from the requirements for a license set forth in 62, 63, and 64 of the Act (42 U.S.C. § 2111 and 42 U.S.C. § 2112) and from these rules to the extent that such contractor, under his prime contract with the DOE

manufactures, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material for:

(i) The performance of work for the DOE at a United States Government owned or controlled site, including the transportation of source material to or from such site and the performance of contract services during temporary interruptions of such transportation;

(ii) Research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof; or

(iii) The use or operation of nuclear reactors or other nuclear devices in a United States Government owned vehicle or vessel.

(iv) In addition to the foregoing exemptions, and subject to the requirement for licensing of DOE facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1980, any prime contractor or subcontractor of the DOE or the Nuclear Regulatory Commission is exempt from the requirements for a license set forth in sections 62, 63, and 64 of the Act and from the regulations in this Chapter to the extent that such prime contractor or subcontractor receives, possesses, uses, transfers or delivers source material under his prime contract or subcontract when the Department determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

(c) The Department fully adopts and hereby incorporates by reference the exemption in 10 C.F.R. 40.12(a) for common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service.

(d) The Department fully adopts and hereby incorporates by reference the requirements for unimportant quantities of source material in 10 C.F.R. 40.13, along with the exclusion of 40.13(c)(5)(iv).

Section 11. Records.

(a) A licensee shall maintain records showing the receipt, transfer, and disposal of all licensed material.

(b) All records required by this Chapter shall be accurate and factual.

(c) The Department fully adopts and hereby incorporates by reference recordkeeping requirements in 10 C.F.R. 40.61 (a), (b), (d), (e), and (f).

(d) If the record retention period is not specified, the record shall be maintained for a period of three years.

Chapter 2

Inspections, Enforcement, and Penalties

Section 1. Purpose.

This Chapter establishes requirements to ensure the protection of the public health and safety and of all persons at, or in the vicinity of, the place of use, storage, or disposal of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content.

Section 2. Scope.

This Chapter applies to the authorized and unauthorized extraction or concentration of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content. The Department may inspect, enforce, and penalize both licensees and non-licensees for the unlawful possession, use, transfer, ownership or other such unpermitted handling of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content in accordance with these rules, the Act, and applicable state and federal laws.

Section 3. Inspections and Testing.

(a) Each licensee and applicant shall obtain, afford, and grant access to the Department, at all reasonable times, the opportunity to inspect licensed material, facilities, premises, and records to ensure compliance with these rules, the Act, licensing conditions, and other applicable state and federal laws.

(b) As required by the Department, each licensee shall perform, or shall permit the Department to perform, such reasonable tests as the Department deems appropriate or necessary including, but not limited to, the testing of:

(i) Source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content;

(ii) Facilities wherein licensed materials are used or stored; and

(iii) Radiation detection and monitoring instruments.

Section 4. Violations.

(a) All violations of this Act or these rules are subject to penalty as provided by Wyoming Statute (W.S.) § 35-11-901.

(b) An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or these rules.

(c) Submittal of false information shall be sufficient basis for rejecting or revoking any

Department issued license, registration, certification or other acceptance, approval or permit.

(d) These rules and regulations shall not limit any existing civil or criminal remedies in accordance with W.S. §. 35-11-904.

Section 5. Enforcement.

(a) The Department may issue Notices of Violation and Orders pursuant to W.S. § 35-11-701.

(b) Licensee initiative for self-identification and correction of problems is encouraged. The Department will generally not issue Notices of Violation for a violation that:

(i) Was identified by the licensee;

(ii) Results in low or no health and safety consequences;

(iii) Was documented, in writing, for review by the Department;

(iv) Was or will be corrected, including measures to prevent recurrence, within ninety (90) days, or another time frame approved by the Department; and

(v) Was not a violation that could reasonably be expected to have been prevented by the licensee's corrective action for a previous violation.

(c) Licensees are not ordinarily cited for violations resulting from matters outside of their control, such as equipment failures that were not avoidable by reasonable quality assurance measures. However, licensees are held responsible for acts of their employees. Accordingly, the rules should not be construed to excuse personnel errors.

(d) At the discretion of the Department, and in accordance with W.S. § 35-11-701, licensees may have the opportunity to eliminate or correct the violation before the issuance of a Notice of Violation if that violation results in low or no health and safety consequences and can be eliminated or corrected in an expedient manner.

Section 6. Orders and other Administrative Actions.

(a) The Department may issue Orders:

(i) To remove a threat to public health and safety or the environment;

(ii) To demand that a Licensee or other person cease and desist violations or unauthorized or illegal activities; or

(iii) For any other reason in which license revocation or suspension is authorized.

(b) The Department may issue Orders to suspend all or part of any regulated activity.

These Orders may be effective immediately, without prior opportunity for hearing, whenever it is determined that public health, interest, or safety so requires, or when responding to a willful or wanton violation.

(c) The Department may hold informal enforcement or settlement conferences to discuss safety, public health, or environmental problems, compliance with regulatory requirements, proposed corrective measures including schedules for implementation, and enforcement.

Chapter 3

Radiation Protection Standards

Section 1. Purpose.

(a) This Chapter establishes standards for protection against ionizing radiation resulting from activities conducted pursuant to licenses issued by the Department.

(b) This Chapter is designed to control the receipt, possession, use, transfer, or disposal of licensed material such that the total dose to an individual, excluding radiation dose from background sources, does not exceed the standards for protection against radiation as outlined in this Chapter.

(c) The limits provided for in this Chapter do not apply to doses due to background, from medical diagnosis or therapy, from individuals administered radioactive material and released, or from voluntary participation in medical research.

Section 2. Scope.

This Chapter applies to persons licensed by the Department to acquire, own, possess, use, transfer, offer or receive for transport, or dispose of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content.

Section 3. Implementation.

Any existing license condition imposed by the Department that is more restrictive than this Chapter remains in force until there is an amendment or renewal of the license.

Section 4. Incorporation by Reference of 10 Code of Federal Regulations (C.F.R.) Part 20; Standards for Protection Against Radiation.

(a) Any reference in these rules to requirements, or procedures contained in 10 C.F.R., Part 20, Sections 20.1001 through 20.2402 shall constitute the full adoption by reference of that part and subparts as they appear in 10 C.F.R., revised as of January 1, 2025, including any notes and appendices therein, unless expressly provided otherwise in these rules. These rules do not include any later amendments or editions of the incorporated matter.

(b) The following 10 C.F.R. sections, as of January 1, 2025, are excluded from these rules and are not incorporated by reference: 20.1001, 20.1002, 20.1003, 20.1004(a), 20.1005, 20.1006, 20.1007, 20.1008, 20.1009, 20.1206, 20.1301(c) and (e), 20.1406(b), 20.1601(f), 20.1903(b), 20.1903(d), 20.1905(g), 20.2003(b), 20.2104 (b), 20.2105, 20.2202(e), 20.2203(c), 20.2204, 20.2206, 20.2401, 20.2402, and Appendix D.

(c) Any references in the federal rules adopted by reference to “NRC Headquarters

Operations Center,” or any component thereof, in 10 C.F.R. Part 20 shall be deemed to be a reference to the Department and the Source Material Program.

(d) Any references in the federal rules adopted by reference to the United States Nuclear Regulatory Commission (NRC), or any component thereof, shall be deemed to be a reference to the Department and the Source Material Program.

(e) Any reference in the federal rules to 10 C.F.R. Parts 50, 52, 54, 60, 63, 72, and 76 are not adopted under the incorporation by reference of 10 C.F.R. Part 20.

(f) When incorporating 10 CFR 20.1406(a), any references to 10 CFR Part 52 are not incorporated by reference.

(g) Any reference in the federal rules adopted by reference to “Form 4” shall be deemed a reference to the Department Form 4.

Chapter 4

Licensing Requirements for Source Material

Section 1. Purpose.

(a) This Chapter establishes the criteria for issuance and terms of conditions upon which the Department may issue licenses to receive title to, acquire, own, possess, use, transfer, offer or receive for transport, or deliver any licensed material. This Chapter also governs the operation of facilities for handling and disposing of licensed material. This Chapter also provides requirements for decommissioning of licensed facilities. Unless otherwise specified, the requirements of this Chapter are in addition to, and not in substitution for, other applicable requirements of these rules.

Section 2. Scope.

(a) This Chapter establishes performance objectives and procedural requirements applicable to any licensee. This Chapter also applies to waste systems for licensed material, including specific technical and financial requirements for siting, construction, operation, monitoring, decontamination, and decommissioning of licensed facilities, as well as requirements for licensee transfer and termination.

(b) A person subject to the regulations of this Chapter may not receive title to, acquire, own, possess, use, transfer, offer or receive for transport, or deliver or dispose of licensed material, after removal from its place of deposit in nature, unless authorized in a general or specific license issued by the Department pursuant to this Chapter.

Section 3. Incorporation by Reference.

(a) The Department fully adopts and hereby incorporates by reference 10 CFR 40.2(a), 40.21, 40.22, 40.41 (a) and (b), 40.42(g)(5), 40.51, 40.54, 40.55, and 61.55, 61.56, and 61.57 revised as of January 1, 2025. These rules do not include any later amendments or editions of incorporated matter.

(b) The following 10 C.F.R. portions, including all subparts, as of January 1, 2025 are excluded from these rules and are not incorporated by reference: 40.22(b)(4) and 40.51(b)(6).

(c) The Department fully adopts and hereby incorporates by reference 10 CFR 150.20 revised as of January 1, 2025. These rules do not include any later amendments or editions of incorporated matter.

Section 4. Deliberate Misconduct.

(a) Any licensee, applicant for a license, employee of a licensee or applicant, or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any component, equipment, materials, or other goods or

services that relate to a licensee's or applicant's activities in part, may not:

(i) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Department.

(ii) Deliberately submit to the Department, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor information known to be materially incomplete or inaccurate.

(b) The Department may bring an enforcement action against any person who violates subparagraphs (a)(i) or (a)(ii) of this section, per Chapter 2 of these rules.

Section 5. Filing an Application for a Specific License.

(a) Two copies of the application for a specific license shall be mailed, or sent electronically as approved by the Administrator, to the Department accompanied with the license application fee, as described in Wyoming Statute (W.S.) § 35-11-2003 and Chapter 7 of these rules, to:

Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th Street, Suite 10
Cheyenne, WY 82002

(b) An application for a specific license, and copies thereof, shall be presented in a clean and orderly manner, as determined appropriate by the Department. Hard copies of specific license applications shall be bound, with the use of a three ring binder or comparable, such that the information is easily accessible, and pages are not misplaced.

(c) Information provided by an applicant or licensee to the Department shall be complete and accurate in all material respects.

(d) Each applicant or licensee shall notify the Department of information identified by the applicant or licensee as having, for the regulated activity, a significant implication for public health and safety. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Department of information that the applicant or licensee has identified as having a significant implication for public health and safety. This requirement is not applicable to information which is already required to be provided to the Department by other reporting requirements.

Section 6. Exemptions from Regulatory Requirements.

(a) Any person is exempt from this Chapter to the extent that such person receives title to, acquires, owns, possesses, uses, or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than one-twentieth of one percent (0.05 percent) of the mixture, compound, solution, or alloy. The exemption contained in this paragraph does not apply to Australian-obligated source material, nor does it include byproduct materials as defined in these rules.

(b) Any person is exempt from this Chapter to the extent that such person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material provided that, except as authorized in specific license, such person shall not refine or process such ores.

(c) Any person is exempt from this Chapter to the extent that such person receives title to, acquires, owns, possesses, uses, or transfers rare earth metals and compounds, mixtures, and products containing not more than 0.25 percent by weight thorium, uranium, or any combination of these.

(d) No person may introduce source material into a product or material either knowing or having reason to believe that it will be transferred to persons exempt under this Chapter.

(e) The Department may, upon its own initiative or the application of an interested person, grant such exemptions from the requirements of this Chapter as authorized by law and, as determined by the Department, will not endanger life, property, and is otherwise in the public interest.

(f) Common and contract carriers, freight forwarders, warehousemen, and the United States Postal Service are exempt from the requirements of this Chapter and the requirements set forth in Section 62 of the Atomic Energy Act of 1954, 42 U.S.C. §§ 2011 *et seq.*, as amended to the extent that they transport or store source material in the regular course of carriage for another or storage incident thereto.

(g) Except to the extent that the Department of Energy's (DOE) facilities or activities, subject to licensing pursuant to Section 202 of the Energy Reorganization Act of 1974 (42 U.S.C. § 5842.), are involved, any prime contractor of the DOE is exempt from the requirements for a license set forth in 62, 63, and 64 of the Act (42 U.S.C. § 2111 and 42 U.S.C. § 2112) and from this Chapter to the extent that such contractor, under his prime contract with the DOE manufactures, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material for:

(i) The performance of work for the DOE at a United States Government owned or controlled site, including the transportation of source material to or from such site and the performance of contract services during temporary interruptions of such transportation;

(ii) Research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof; or

(iii) The use or operation of nuclear reactors or other nuclear devices in a United States Government owned vehicle or vessel.

(iv) In addition to the foregoing exemptions, and subject to the requirement for licensing of DOE facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1980, any prime contractor or subcontractor of the DOE or the Nuclear Regulatory Commission is exempt from the requirements for a license set forth in sections 62, 63, and 64 of the Act and from the regulations in this Chapter to the extent that such prime contractor or subcontractor receives, possesses, uses,

transfers or delivers source material under his prime contract or subcontract when the Department determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

(h) This Chapter shall not be deemed to authorize the import of radioactive material or products containing radioactive material.

Section 7. Pre-Licensing Construction.

(a) Except as provided in this Chapter, the applicant shall not commence construction at any plant or facility in which the licensed activity will occur until the Department has issued a license. Commencement of Construction, defined in Chapter 1 of these rules, prior to issuance of the license may be grounds for denial of a license.

(b) At a minimum, an application for a specific license to receive title to, acquire, own, possess, use, transfer, offer or receive for transport, and use licensed material shall be filed with the Department at least nine (9) months prior to the commencement of construction of any plant or facility in which the licensed activity will occur, and in accordance with existing applicable law.

Section 8. General Requirements for Issuance of Specific Licenses

(a) An application for a specific license may be approved if the Department determines that:

(i) The applicant is qualified by reason of training and experience, to use licensed material for the purpose requested in the subject application consistent with the governing statutes and rules and in such a manner as to minimize danger to public health and safety, or property;

(ii) The applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property;

(iii) The applicant satisfies the requirements listed in this Chapter;

(iv) The issuance of the license will not be detrimental to the health and safety of the public;

(v) The applicant is financially qualified to conduct the licensed activity, including any required decontamination, decommissioning, reclamation, or disposal; and

(vi) The applicant has satisfied the requirements of Chapter 6 of these rules.

(b) The Department may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Department to determine whether the application should be granted or denied or whether a license should be

modified or revoked. All applications and statements shall be signed by the applicant or a person duly authorized to act for and on his behalf.

(c) Upon determination that an application meets the requirements of the Act, applicable rules, and public health and safety considerations, the Department may issue a specific license authorizing the proposed activity in such form, and containing such conditions and limitations, as the Department deems appropriate or necessary.

(d) The Department may incorporate conditions or provisions in any license at the time of issuance, with respect to the licensee's receipt, possession, use, and transfer of licensed material subject to this Chapter as it deems appropriate or necessary in order to:

- (i) Minimize danger to public health and safety, and the environment;
- (ii) Require reports and recordkeeping, and to provide for such inspections of activities under the license as may be appropriate and necessary; and
- (iii) Prevent loss or theft of licensed material subject to this Chapter.

(e) All licenses, whether issued by the Department, and the authorization to possess or utilize licensed material cannot be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of any license to any person unless the Department, after securing full information, determines the transfer is in accordance with the Act and these rules. Upon the transfer of an existing license, the new licensee shall comply with existing laws and license conditions. The Department may impose new license conditions to be complied with by the new licensee as it deems necessary. An application for transfer of license must include:

- (i) The identity, technical and financial qualifications of the proposed transferee; and
- (ii) Financial assurance for decommissioning information required by Chapter 6 of these rules.

(f) Each licensee pursuant to this Chapter shall confine use and possession of licensed material to the locations and purposes authorized in the license.

(g) Each licensee shall notify the Department in writing when the licensee decides to permanently discontinue all activities involving materials authorized under the license.

(h) Each licensee shall notify the Department in writing within seven (7) business days following the filing of voluntary or involuntary petition for bankruptcy under any Chapter of the United States Code (U.S.C.) by or against:

- (i) The licensee;
- (ii) An entity controlling the licensee, or listing the license or licensee as property of the estate as that term is defined in 11 U.S.C. § 101(14); or

(iii) An affiliate of the licensee as that term is defined in 11 U.S.C. § 101(2).

(i) The written notification of bankruptcy submitted to the Department shall identify the bankruptcy court in which the petition for bankruptcy was filed, the case number, and the date of filing.

(j) The licensee shall allow the Department, to enter and inspect any licensed area as provided by W.S. §§ 35-11-109(a)(iv), (v) and (vi). The licensee shall obtain for the Department the right to access and cross over private lands leading to or within a licensed area for inspection of regulated activities consistent with state law and these rules. The right to access and cross over private property shall be in writing, notarized, included in the application, and contain the following:

(i) The name of the landowner of the property to be accessed or crossed;

(ii) A legal description of the lands, using Public Land Survey System nomenclature that will be crossed during the inspection process;

(iii) A declarative statement from the landowner providing the Department permission to access the described private property for the inspection of regulated activities; and

(iv) The landowner's signature.

(v) In lieu of the foregoing, the licensee may provide the Department with an executed Department, Land Quality Division, Form 8 or a copy of the Surface Use Agreement clearly providing the Department the authority to access or cross over the subject private property.

Section 9. Specific Requirements for Issuance of Specific Licenses

(a) A specific license for source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content will be issued if the applicant submits to the Department a complete and accurate application that clearly demonstrates how the requirements and objectives of this Chapter are met.

(b) An application for a license, including applications for the amendment or renewal of an existing license, to receive, possess and use licensed material shall contain all information required under these rules and such material as the Department may deem necessary. The application shall, at a minimum, contain the following information:

(i) A description of the proposed project or action;

(ii) For new licenses, environmental data that includes the results of a one-year preoperational monitoring program;

(iii) For renewal of licenses, environmental data containing results of the operational monitoring program or monitoring required to be conducted if the facility was not in operation but in standby mode;

- (iv) Site characteristics, including regional and site specific geology, topography, hydrology, and meteorology;
- (v) Radiological and non-radiological impacts of the proposed project or action including waterway and groundwater impacts;
- (vi) An assessment of the radiological and non-radiological impacts to the public health and the environment;
- (vii) Consideration of the long-term impacts of the licensed activities;
- (viii) A representative presentation of the physical, chemical, and radiological properties of the type of licensed material to be received, stored, processed, or disposed of;
- (ix) An evaluation of the short-term and long-term environmental impacts of such receipt, storage, processing, or disposal;
- (x) An analysis of the environmental, economic, social, technical, and other benefits of the proposed activities against environmental costs and social effects;
- (xi) Environmental effects of accidents;
- (xii) Decommissioning, decontamination, reclamation, and impacts of these activities;
- (xiii) A closure plan to be included in the reclamation plan for decontamination, decommissioning, restoration, and reclamation of buildings of the licensed area to levels that would allow where applicable unrestricted use;
- (xiv) Proposal of an acceptable form and amount of financial assurance in accordance with Chapter 6 of these rules;
- (xv) Specifications for the emissions control; and
- (xvi) Emergency response protocol.

(c) For applications for a new license or application for a license amendment to expand the licensed site, proof of mailed notification to the owner or owners of the property on which licensed material is recovered, stored, processed, or disposed of must be demonstrated to the Department. The applicant for a new license must demonstrate that the owner or owners of the property were sent by certified United States mail, notification from the applicant stating that:

- (i) Licensed radioactive material will be recovered, stored, processed, or disposed on the property; and
- (ii) Decommissioning by the Department, funded by a surety, or as directed by order may be required and performed on the licensed site even if the licensee is unable or fails

to decommission the licensed site as required by license.

(d) Environmental concerns outlined in subsection (b) of this section need to be resolved when the Department:

(i) Receives application for a new specific license or renewal of a specific license;

(ii) Receives an amendment request that would authorize or result in:

(A) A significant expansion of a site;

(B) A significant change in the type of releases;

(C) A significant increase in the amounts of releases;

(D) A significant increase in individual or cumulative occupational radiation exposure; or

(E) A significant increase in the potential for or consequences from radiological accidents.

(e) The Department may exempt an applicant or licensee from the requirement to submit additional environmental impact information on the determination that environmental concerns are addressed through information previously provided to the Department.

(i) In considering exemptions, the Department may request additional information to ensure that no significant environmental impacts will result from the proposed or licensed activity.

(f) The applicant shall provide written specification describing the means employed so that all airborne effluent releases are reduced to levels as low as is reasonably achievable (ALARA) during the operational phase of any project.

(g) During any one full year prior to submittal of a new application or an amendment to expand the licensed area or operations, the applicant or licensee shall conduct a preoperational monitoring program to provide complete baseline data on an in situ recovery or a conventional milling site describing its pre-operational environment condition.

(h) Throughout the construction and operating phases of the in situ recovery facility or conventional mill, the applicant or licensee shall conduct an operational monitoring program to measure or evaluate compliance with applicable standards and regulations, in order to evaluate performance of control systems and procedures, environmental impacts of operation, and to detect potential long-term effects.

(i) Upon receipt of the license application or any amendments thereto, and of any other documents required, the Department may transmit information for review and comment to federal, state, and local agencies having expertise in or jurisdiction over the proposed project or

activity. Written comments and reports of reviewing agencies may be considered by the Department in its decision-making review process on the license application or amendment.

(i) If an Environmental Impact Statement (EIS) or Environmental Assessment (EA) is required by a federal agency pursuant to the National Environmental Policy Act of 1969 (NEPA) and is provided by such federal agency, it may be used in the Department's decision-making review process.

(j) An application for a license shall contain proposed specifications relating to the management and disposition of licensed material or wastes resulting from activities that generate licensed material.

Section 10. Operational Requirements.

Each licensee shall:

(a) Operate in accordance with the requirements and objectives of this Chapter, including the procedures required by Section 9(f) and the monitoring required by Section 9(g).

(b) Submit a semi-annual report to the Department within sixty (60) days following January 1 and July 1 of each year. The report must specify the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous six months of operation, and such other information as the Department may require to estimate the maximum potential annual radiation doses to the public resulting from effluent releases. If quantities of radioactive materials released during the reporting period are significantly above the licensee's design objectives previously reviewed as part of the most recent licensing action, the report shall cover this specifically. On the basis of such reports or any additional information the Department may obtain from the licensee or others, the Department may require the licensee to take such actions as the Department deems appropriate to protect public health and safety and the environment.

(c) Licensee shall report events that have significant radiological effects on employee safety, public health, or the environment to the Department according to the following:

(i) All licensees shall notify the Department as soon as possible but no later than four (4) hours after the discovery of an event that prevents immediate protective actions necessary to avoid exposure to radiation or licensed materials that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).

(ii) Each licensee shall notify the Department within twenty-four (24) hours after the discovery of any of the following events involving licensed material:

(A) An unplanned contamination event that:

(I) Requires access to the contaminated area, by workers or the public, to be restricted for more than twenty-four (24) hours by imposing additional radiological controls or by prohibiting entry into the area;

(II) Involves a quantity of material greater than five times the lowest annual limit on intake specified in 10 C.F.R. Part 20, Appendix B; and

(III) Requires access to the area restricted for a radiological safety reason other than to allow isotopes with a half-life of less than twenty-four (24) hours to decay prior to decontamination.

(B) An event in which equipment is disabled or fails to function as designed when:

(I) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(II) The equipment is required to be available and operable when it is disabled or fails to function; and

(III) No redundant equipment is available and operable to perform required safety function.

(C) An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body;

(D) An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:

(I) The quantity of material involved is greater than five times the lowest annual limit on intake specified in 10 C.F.R. Part 20, Appendix B.

(II) The damage affects the integrity of the licensed material or its container.

(iii) Reports made by the licensees in response to the requirements of this Section must be made as follows:

(A) Licensees shall make reports required by Sections 10(c)(i) and 10(c)(ii) of this Chapter by telephone to the Department. To the extent that the information is available at the time of notification, the information provided in these reports must include:

(I) The caller's name and telephone number;

(II) A description of the event, including date and time;

(III) The exact location of the event;

(IV) The isotopes, quantities, and chemical and physical form of the licensed material involved; and

(V) Any personnel radiation exposure data available.

(B) Licensees who make a report required by Section 10(c)(i) and 10(c)(ii) of this Chapter shall submit a written follow-up report within 30 days of the initial report.

(C) Written reports prepared pursuant to other applicable rules may be submitted to fulfill this requirement if the reports contain all of the necessary information and the appropriate distribution is made. The reports must include the following:

(I) A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(II) The exact location of the event;

(III) A description of the isotopes, quantities, and chemical and physical form of the licensed material involved;

(IV) Date and time of the event;

(V) Corrective actions taken or planned and the result of any evaluations or assessments;

(VI) Timely schedule for remediation of the spill or release, if required; and

(VII) The extent of exposure of individuals to radiation or to radioactive materials without identification of the individuals by name.

Section 11 Expiration and Termination of Licenses.

(a) Expiration of the specific license does not relieve the licensee of the requirements of the Act, these rules, or existing license conditions.

(b) All license provisions continue in effect beyond the expiration date with respect to possession of licensed material until the Department notifies the former licensee in writing that the provisions of the license are no longer binding. During this time, the former licensee must:

(i) Limit actions involving radioactive material to strictly decommissioning related activities; and

(ii) Continue to control entry to restricted areas until the location(s) is suitable for release for unrestricted use.

(c) A licensee shall notify the Department, in writing to request the termination of the license within seven (7) days from when the licensee decides to terminate all licensed activities. This notification and request for termination of the license shall include the reports on decommissioning and reclamation activities as required by this Chapter.

(d) No less than thirty (30) days before the expiration date specified in the license, the licensee shall either:

- (i) Submit an application for license renewal; or
- (ii) Notify the Department, in writing, if the licensee decides not to renew the license.

(e) If a licensee does not submit a notification for a license renewal under Section 13 of this Chapter the licensee shall, on or before the expiration date specified in the license:

- (i) Terminate use of licensed material;
- (ii) Remove radioactive contamination to the extent practicable;
- (iii) Properly dispose of the licensed material; and
- (iv) Submit a completed Department Form SMP-314 or equivalent.

Section 12. Renewal of Licenses.

(a) A licensee shall notify the Department of their intent to renew their license at least thirty (30) days prior to the expiration of the existing license.

(i) Upon receipt of the notification to renew, the Department shall open the original license application, including, but not limited to, all applicable renewals and amendments, to:

- (A) Ensure the application accurately reflects current operations;
 - (B) Incorporates changes to industrial standards codified in these rules;
- and
- (C) Incorporate operational data to accurately set design objectives.

(b) If an application for renewal has been filed at least thirty (30) days before the expiration date stated in the existing license, the existing license expires at the end of the day on which the Department makes a final determination to deny the renewal application or, if the determination states an expiration date, the expiration date stated in the determination.

Section 13. Amendments of Licenses at Request of Licensee.

(a) Application for amendment of a license shall be filed in accordance with Section 9 of this Chapter and shall specify the items which the licensee desires the license to be amended and the grounds for such amendment such items being beyond the scope of the licensee's ability to address under its performance based license.

(b) In considering an application by a licensee to renew or amend his license the Department will apply the applicable criteria set forth in Section 8(a) of this Chapter.

Section 14. Modification and Revocation of Licenses.

(a) The terms and conditions of all licenses shall be subject to amendment, revision, or modification at the request of the licensee.

(b) The Department may suspend or revoke a license for significant noncompliance to the Act, rules, regulations, or orders issued by the Department.

(c) The Department may suspend or revoke any license in whole or in part, for any false material statement in the application, any false statement of fact required under the provisions of the Act, or because of any report, record, or inspection or other means which would warrant the Department to refuse to grant a license on an original application.

(d) Except in the case of wanton and willful behavior or in situations where the public health, interest, or safety requires otherwise, no license shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefore, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

Section 15. Public Notice.

(a) Upon completion of the Department's review of an application, the Department shall provide notice to the public of issuance of an initial draft decision where the license application is approved, approved with conditions, or denied.

(i) The initial draft decision shall include, but is not limited to, the following:

(A) A decision analysis, that includes discussions on environmental impacts; and

(B) The final technical analysis conducted by the Department.

(ii) Upon issuance of the initial draft decision described in Section 15(a)(i), or a licensing action that significantly impacts the environment or public health and safety, the Department shall initiate a public comment process, and hold a public hearing upon written request from an “aggrieved party” as defined in W.S. § 35-11-103(a)(vii). If a public hearing is requested, the Department shall publish notice of the public hearing in a newspaper of statewide or general circulation or on the Department’s website before the public hearing. The notice of the public hearing shall include:

(A) The time, place, and nature of the hearing;

(B) A copy of the initial draft decision; and

(C) A statement detailing where public comments may be submitted.

(iii) Pursuant to the request and notice described in Section 15(a)(ii), the Department shall hold a public hearing. Such hearing shall be transcribed and, at a minimum, require:

- (A) The opportunity for cross-examination;
- (B) A summary of the licensing activity proposed in the application;
- (C) An opportunity for the public to comment and be heard.

and

(iv) The Rules of Practice and Procedure applicable to hearings before the Department shall apply. To the extent that any inconsistencies exist between the Rules of Practice and Procedure and these rules, these rules shall govern.

(b) For applications which are denied, the Department shall issue a written summary containing the basis for denial.

(c) The applicant or licensee shall pay for the expenses associated with public notice, public comment, or public meetings associated with the specific licensing request by the applicant or licensee.

(d) Following the public comment period and public hearing associated with a specific licensing request, the Department shall, after review of the public comments received by the Department, issue a written final decision. The final decision must ban all major construction before the completion of the written environmental analysis. The final decision is subject to review by the Environmental Quality Council and judicial review in accordance with Wyoming law.

Section 16. Decommissioning Requirements.

(a) The licensee shall notify the Department in writing within sixty (60) days of the licensee deciding to permanently cease principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with these regulations.

(b) The licensee shall notify the Department in writing within sixty (60) days if no principal activities under the license have been conducted for a period of twenty-four (24) months; or no principal activities have been conducted for a period of twenty-four (24) months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with these rules.

(c) From the date of written notification sent to the Department required in Sections 16(a) and (b), the licensee shall either:

- (i) Begin decommissioning activities; or
- (ii) Within twelve (12) months of written notification submit a

decommissioning plan, if required by section 17(a) of this Chapter and begin decommissioning upon the Department approval of that plan.

(d) The Department may grant a request to delay or postpone initiation of the decommissioning process if the Department determines that such relief is not detrimental to the public health and safety and is otherwise in the public interest.

(e) Coinciding with and in addition to the notification requirements of Sections 16(a) and (b) of this Chapter, the licensee shall maintain in effect all decommissioning financial assurances as required by Chapter 6 of these rules. The amount of financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to Section 17 of this Chapter.

(f) The Department may approve an alternate schedule for the submission of plans and for the completion of decommissioning as required pursuant to Sections 16(a) and (b) if the Department determines that the alternate schedule: (1) is necessary to effectively conduct decommissioning, (2) presents no undue risks to public health and safety, and (3) is otherwise in the public's interest. The request for an alternate schedule must be submitted no later than thirty (30) days before the required notification in Section 16(a) of this Chapter. The schedule for decommissioning may not commence until the Department has made a determination on the request for an alternate schedule.

(g) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the Department determines, where applicable, that:

(i) Licensed material has been properly disposed;

(ii) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

(A) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the applicable criteria for decommissioning found in 10 C.F.R. 20.1401 through 20.1406; or

(B) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the applicable criteria found in this chapter.

(iii) The Department has made a determination that all applicable standards and requirements have been met.

(h) A licensee may request that a subsite or a portion of a licensed area be released for unrestricted use before full license termination as long as release of the area of concern will not adversely impact the remaining unaffected areas and will not be recontaminated by ongoing authorized activities. When the licensee is confident that the area of concern will be acceptable to the Department for release for unrestricted use, a written request for release for unrestricted use and Department confirmation of closeout work performed shall be submitted to the Department. The request should include a comprehensive report, accompanied by survey and sample results

that show contamination is less than the limits specified in 10 C.F.R. 20.1401 through 20.1406 and an explanation of how ongoing authorized activities will not adversely affect the area proposed to be released. Upon confirmation by the Department that the area of concern is releasable for unrestricted use, the licensee may apply for a license amendment, if required.

Section 17. Decommissioning Plan.

(a) Each licensee authorized to receive, possess, and use licensed material shall submit a plan for completion of decommissioning. The decommissioning plan will be approved by the Department if the plan demonstrates that decommissioning will be completed as soon as practical while adequately protecting the health and safety of workers and the public, if the procedures necessary to carry out decommissioning:

(i) Have not been previously approved by the Department; and

(ii) Could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(A) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(B) Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(C) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(D) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(b) Procedures listed in paragraph (a) of this section with potential health and safety impacts may not be carried out prior to approval of the decommissioning plan.

(c) The proposed decommissioning plan, if required by this Chapter or by license condition must include:

(i) Description of the condition of the site, separate buildings, or outdoor areas sufficient to evaluate the acceptability of the plan;

(ii) Description of planned decommissioning activities;

(iii) Description of methods used to assure protection of workers and the environment against radiation hazards during decommissioning;

(iv) A description of the planned final radiation survey; and

(v) An updated detailed cost estimate for decommissioning, comparison of

that estimate with present funds set aside for decommissioning, and plan for assuring the availability of adequate funds for completion of decommissioning.

(A) For decommissioning plans calling for completion of decommissioning later than twenty-four (24) months after plan approval, the licensee must provide a justification for any delay based on the criteria in subsection (f) of this Section.

(d) Except as provided in subsection (f) of this Section, the licensee shall complete decommissioning of the site, separate buildings, and outdoor area as soon as practicable but no later than twenty-four (24) months following the initiation of decommissioning.

(e) Except as provided in subsection (f) of this Section, when decommissioning involves the licensed area, the licensee shall request license termination as soon as practicable but no later than twenty-four (24) months following the initiation of decommissioning.

(f) The Department may approve a request for an alternate schedule for completion of decommissioning of the site or separate building or outdoor area(s), and license termination if appropriate and if the Department determines that the alternative schedule is warranted. In doing so, the Department shall consider the following:

(i) Whether it is technically feasible to complete decommissioning within the allotted twenty-four (24) month period;

(ii) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted twenty-four (24) month period;

(A) Including whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay.

(iii) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(iv) Other site specific factors which the Department may consider appropriate on a case-by-case basis, such as the regulatory requirement of other government agencies, lawsuits, groundwater treatment activities, monitored natural groundwater restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(g) After submittal and upon approval of the decommissioning plan by the Department, the licensee shall decommission in accordance with the approved plan. As a final step in the decommissioning the licensee shall:

(i) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed Department Form SMP-314 or equivalent;

(ii) Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with

the criteria for decommissioning in this Chapter. The licensee shall:

(A) Report levels of gamma radiation in units of microroentgen (millisieverts) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of microcuries (disintegrations per minute or megabecquerels) per 100 square centimeters removable and fixed for surfaces, microcuries (megabecquerels) per milliliter for water and picocuries (becquerels) per gram for solids such as soils or concrete; and

(B) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

Chapter 5

Notices, Instructions, and Reports to Workers

Section 1. Purpose.

This Chapter establishes requirements for notices, instructions, and reports by licensees to individuals engaged in work under a license and options available to such individuals in connection with the Department's inspections of licensees to ascertain compliance with the provisions of the Wyoming Environmental Quality Act, Wyoming Statute §§ 35-11-2001 *et seq.*, and regulations, orders, and licenses issued thereunder regarding radiological working conditions as specified within the provision of the Atomic Energy Act of 1954, as amended.

Section 2. Scope.

This Chapter applies to all persons who receive, possess, use, own, or transfer source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content.

Section 3. Incorporation by Reference (IBR) of 10 Code of Federal Regulations (C.F.R.) Part 19; Notice, Instructions and Reports to Workers: Inspection and Investigations.

(a) The Department fully adopts and hereby incorporates by reference 10 C.F.R. Part 19, revised as of January 1, 2025, including all sections and any notes and appendices therein, unless expressly provided otherwise in these rules. These rules do not include any later amendments or editions of the incorporated matter.

(b) The following 10 C.F.R. sections as listed on January 1, 2025 are excluded from these rules: 19.1, 19.2, 19.3, 19.5, 19.11(b) and (e), 19.8, 19.14(a), 19.18, 19.30, and 19.40.

(c) Any references in 10 C.F.R. Part 19 adopted by reference to the United States Nuclear Regulatory Commission (NRC) or any component thereof shall be deemed to be a reference to the Department.

(d) Any reference in the federal rules adopted by reference to the Commission's "Form 3" shall be deemed a reference to the Department's "Source Material Program Form 3". Each licensee shall prominently post the Department's Source Material Program Form 3.

(e) In 10 C.F.R. Part 19, any references to 10 C.F.R. Parts 50, 52, 54, 60, 63, 72, and 76 are not incorporated by reference.

(f) In 10 C.F.R. Section 19.32, any references to the Atomic Energy Act of 1954, as amended, or under any title of the Energy Reorganization Act of 1974, as amended, are not references to the Wyoming Statute.

Chapter 6

Financial Assurance Requirements

Section 1. Purpose.

(a) This Chapter provides for financial assurance arrangements in support of decontamination, decommissioning, reclamation, restoration, disposal, and any other activity required by the Department, for costs associated with the licensed facilities and sites.

Section 2. Scope.

(a) This Chapter sets forth the requirements of Wyoming Statute (W.S.) §§ 35-11-417 through 418 for the establishment of financial assurance arrangements for licensees listed in these rules. Such financial assurance arrangements may consist of surety bonds, federally insured certificates of deposit payable to the Department, cash deposits, certificates of deposits, deposits of government securities, irrevocable letters of credit issued by a bank organized to do business in the United States, or any combination of approved mechanisms.

(b) Licensees shall comply with the requirements of 10 Code of Federal Regulations (C.F.R.) Sections 20.1401-1405.

(c) References to 10 C.F.R. 20.1401 regarding Parts 50, 52, 54, 60, 63, and 72 are not incorporated by reference.

Section 3. Terms Unique to Financial Assurance.

(a) "Annual Review" is conducted during the review of the annual report which is due on the anniversary date of the establishment of the permit to mine or source material license in circumstances where no permit exists.

(b) "Cost Estimate" means a document containing the total costs that would be incurred if an independent contractor were hired to perform the decommissioning of the facility and disposal of licensed material, and all associated costs to the Department in conducting decommissioning oversight. Costs must reflect current approved estimated costs.

(c) "Facility" means the location within one building, vehicle, or under one roof and under the same administrative control: (1) at which the possession, use, processing, or storage of licensed material is or was authorized; or (2) may also mean multiple such locations at a site or part of a site.

Section 4. Financial Assurance.

(a) The Department requires specific source material licensees to furnish a decommissioning financial assurance arrangement in a dollar amount approved by the Department, as necessary to protect public health and safety, to ensure corrective action during operation, to ensure decontamination and decommissioning of a facility or site, and for disposal

of licensed material in the event of abandonment, insolvency, or other inability of the licensee to meet the requirements of the license, the Act, or these rules.

(b) The costs associated with reclamation in accordance with this Chapter shall be sufficient to ensure compliance with those standards established by the Department pertaining to bonds, sureties, and other financial arrangements to ensure adequate reclamation and long term management of such material and its disposal.

(c) Licensees shall provide the Department with cost-estimates that are reasonably accurate and these estimates shall include costs for the following:

(i) Disposal of licensed material;

(ii) Decontamination and decommissioning of buildings, facilities, and the site to a standard which achieves levels that allow release for unrestricted use of these areas upon decommissioning;

(iii) Reclamation of licensed areas to meet the requirements of 10 C.F.R. Sections 20.1401-1405;

(iv) Costs that would be incurred if an independent contractor was hired to dispose of radioactive materials and perform decontamination, decommissioning, and reclamation work including:

(A) The cost of removal and/or disposal of licensed material which is generated, stored, processed, or otherwise present at the facility or site; and

(B) The probable extent of contamination through the possession or use of licensed material, at or adjacent to the facility or site, and the probable cost of removal of such contamination;

(v) An adequate contingency factor.

(d) Prior to approval of an application for a new license, an applicant shall establish financial assurance arrangements to ensure the decontamination and decommissioning of the facility.

(e) Applicants shall provide an executed original copy of each financial assurance instrument required by this Chapter for approval by the Department as appropriate.

(i) An applicant for a new license shall submit a certification that financial assurance for decommissioning has been provided in the amount required by this Chapter. An executed original copy of each financial assurance instrument required by this Chapter and approved by the Department shall be submitted to the Department sixty (60) days prior to the approval of the Permit to Mine and Source Material License.

Section 5. Acceptable Financial Assurance Methods.

(a) Refer to W.S. §§ 35-11-417 through 418 for acceptable financial instruments and assurances.

(b) Self-insurance, or any arrangement that essentially constitutes self-insurance (for example, a contract with a state or federal agency), including bonding pursuant to W.S. § 35-11-417(d) will not satisfy the financial assurance requirements of these rules.

(c) The term of the financial assurance warranty shall automatically renew until termination of the license by the Department, unless it can be demonstrated that another arrangement would provide an acceptable level of assurance. The requirements for cancellation or substitution of the financial assurance warranty are outlined in W.S. §§ 35-11-420 and 35-11-421.

(d) The value of the financial assurance warranty shall not be dependent upon the success, profitability, or continued operation of the licensed operation.

Section 6. Periodic Review of Financial Assurances.

(a) As part of the annual report, a licensee shall provide to the Department written proof of the value of existing financial warranties and any licensee-proposed changes to the financial assurance warranties, including updated decommissioning plans, changes in cost estimates, or the changes to the type of warranty. The report shall describe any changes in operations, estimated costs, or any other circumstances that may affect the amount of required financial assurance warranties, including any increased cost attributable to inflation.

(b) Each financial assurance shall be subject to annual review, at a minimum, and approval by the Department to assure its continued adequacy of each warranty.

(c) With the approval of the Department, changes to the amount of a decommissioning financial assurance instrument may occur to account for increases or decreases in cost estimates resulting from inflation or deflation, changes in engineering plans, activities performed, or changes in any other condition affecting disposal, decontamination, and decommissioning costs.

(i) With the approval of the Department, reduction in the amount of decommissioning financial assurance may occur as decommissioning activities are completed, in accordance with an approved decommissioning plan or to reflect current site conditions and license authorization.

(d) Appropriate and adequate decommissioning financial assurances shall be maintained in effect and in good standing by the licensee until termination of the license or as otherwise authorized by the Department, regardless of whether decommissioning is phased through the life of licensed operations or occurs at the end.

(e) The Department fully adopts and hereby incorporates by reference the following: 10 C.F.R. 40.36 (d)(1)(ii) and (iii), and 40.36(d)(2)(i)-(viii).

Section 7. Financial Assurance Recordkeeping.

(a) Licensees shall keep records of financial assurances throughout the life of the license, including, but not limited to, records of the cost estimate performed for the decommissioning, the amount certified for decommissioning, and records of the funding method used for assuring funds.

(b) The Department fully adopts and hereby incorporates by reference the following: 10 C.F.R. 40.36(f)(1)-(3).

Chapter 7

Fees

Section 1. Purpose.

(a) As authorized by the Act to support all direct and indirect costs associated with the operation of the Program, this Chapter establishes fees for radiation control services rendered by the Department and provisions regarding payment.

Section 2. Scope.

- (a) These rules apply to a person who is:
- (i) An applicant for or holder of a specific source material license issued by the Department pursuant to Chapter 4 of these rules or by the NRC or another Agreement State; and
 - (ii) Required to have routine and non-routine safety inspections of licensed activities.

Section 3. Costs Generally.

(a) "Direct Costs" are operating costs directly assignable to the Program. Direct Costs include salaries, supplies, travel, and other costs incurred by the Program such as, but not limited to, costs associated with processing license applications, inspecting sites, and developing program rules.

(b) "Indirect Costs" are costs not directly assignable to the Program. Indirect Costs include the cost of activities such as human resource management, procurement, and accounting. Indirect Costs include the partial costs of state agencies such as Administration and Information, the Treasurer's Office, and other state agencies providing support or resources to the Program. These are costs which indirectly support the ability of the Program to function, but are not directly related to producing or inspecting a license or the immediate management of those functions. Uncollected fees from licensees will be charged as Indirect Costs for the following year. Indirect Costs will be collected by the Department as described in Section 4, below.

- (c) Direct Costs fall into two different categories:
- (i) "Site Specific Direct Costs" are incurred by the Department in the form of time and resources for a specific applicant or licensee. Site Specific Direct Costs shall include, but are not limited to, the costs of reviewing applications, amendments, inspections, or incident responses.
 - (ii) "Non-Site Specific Direct Costs" are not attributable to a specific licensee, but represent a cost to the Department attributable to the Program. These types of costs shall include, but are not limited to, materials such as paper and other office supplies, training of staff, development of guidance documents, and other general administrative costs.

(d) The accumulation of costs can be described as follows:

(i) "Total Direct Costs" are the combination of the Site Specific Direct Costs and Non-Site Specific Direct Costs.

(ii) "Total Costs" are the sum of Site Specific Direct Costs, Non-Site Specific Direct Costs, and Indirect Costs.

(e) "Fiscal Year" is the twelve (12) month period from July 1 through June 30, as used by the State of Wyoming for budget formulation and execution.

(f) "Projected Costs" are the most recent two (2) year average of Total Costs assumed by the licensee, adjusted to the current year's program budget.

Section 4. Tracking Costs.

(a) The Department shall keep a record of Site Specific Direct Costs associated with each license.

(b) Non-Site Specific Direct Costs shall be distributed to all licensees based on the proportion of an individual licensee's Site Specific Direct Costs, as compared to the combined Total Costs of all licensees. For example, if company X demands roughly fifty percent (50%) of the total billable Site-Specific Direct Costs for the Program they will be charged fifty percent (50%) of the Non-Site Specific Direct Costs.

(c) Indirect Costs will be calculated and allocated to licensees and the Program using the rates and basis for application detailed in the Cognizant Agency Negotiation Agreement, negotiated between the Department and the federal government. Indirect Costs are applied to both Site Specific and Non-Site Specific Direct Costs.

Section 5. Application Fees.

(a) All new license applications shall be accompanied by an initial one hundred thousand dollar (\$100,000.00) application fee. The application fee shall only cover the costs associated with processing the license application.

(b) The application fee shall be carried forward until the Department issues a license to the applicant. If the application fee is expended before the license is issued, an additional one hundred thousand dollar (\$100,000.00) application fee shall be assessed and collected from the applicant. This shall continue in increments of one hundred thousand dollars (\$100,000.00) until the Department issues a license to the applicant.

(c) Once the Department issues a license, the new licensee will be refunded or credited the amount of any unused portions of the application fee.

(d) Applicants that withdraw an application will not be refunded the unused application fee and forfeit any remaining initial application fees paid to the Department. However, applicants that withdraw an application after paying the additional application fees, as

described in subparagraph (b) above, shall be refunded the unexpended balance of the additional application fees.

Section 6. Annual Fees.

(a) Annual fees are to be paid in full prior to the fiscal year for which the fees are assessed. The Department shall notify all licensees of the amount of their annual fee ninety (90) days prior to the start of the fiscal year. The annual fee must be received and processed prior to the Department taking any licensing or other requested action.

(b) Until the Department can establish Projected Costs for a licensee, the licensee shall be billed a predetermined annual fee. The predetermined annual fee shall be equal to the annual estimated cost of the Program divided by the total number of licensees.

(c) Once the Department establishes Projected Costs for a licensee, the licensee shall be assessed an annual fee based on the licensee's average Total Costs from the previous two years of operation.

(d) A new licensee shall be billed an annual fee equal to the average Total Costs of all licensees, until Projected Costs can be established.

(e) Following recognition of all costs for a fiscal year, the Department shall prepare a statement for each licensee showing the itemized actual Total Costs for the fiscal year.

(i) If the annual fee collected from the licensee exceeds the Total Costs attributable to the licensee, the statement shall be accompanied by a credit or refund of the difference in amounts to the licensee.

(ii) If the annual fee collected from the licensee is less than the Total Costs attributable to the licensee, the statement shall be accompanied by an invoice covering the difference in amounts owed to the Department. The licensee shall have sixty (60) days from the date of the invoice to pay the Department the full outstanding balance of the invoice.

(f) New licenses issued after the beginning of the fiscal year will be assessed an annual fee, as described above, but the fee will be prorated based on the date the license was issued.

(g) Failure to pay prescribed fees may result in, and is not limited to, the Department halting the processing of an amendment, suspending or revoking a license, or issuing a notice of violation and order as the Department deems necessary and appropriate to carry out the provisions of the Act.

(h) The minimum annual fee for all licensees is one thousand dollars (\$1,000.00).

Section 7. Method of Payment.

Payments made under this Chapter shall be paid in U.S. dollars through electronic funds transfer, check, or money order made payable to the Wyoming Department of Environmental Quality.

Chapter 8

Risk Informed, Performance Based Licensing and Inspection

Section 1. Purpose.

(a) This Chapter establishes a risk informed, performance based regulatory framework as it will be applied to licensees regulated by the Program. No undue risk to public health, safety, or the environment shall occur as a result of licensed operations by the licensee under this regulatory framework.

Section 2. Scope.

(a) Except as otherwise specifically provided, this Chapter applies to all persons who acquire, own, possess, use, transfer, offer and receive for transport, use, or dispose of any licensed material pursuant to these rules. Nothing in this Chapter shall apply to any person subject to regulation not relinquished by the NRC.

Section 3. Regulatory Approach.

(a) The Department shall determine licensing inspection actions, enforcement, and other decisions by the Program based on the risk informed, performance based regulatory approach which is a combination of the following approaches:

(i) “A risk informed approach” to regulatory decision-making represents a philosophy whereby risk insights are considered together with other factors to establish requirements that better focus licensee and regulatory attention on design and operational issues, pertaining to licensed material safety, commensurate with their importance to employee health and safety, public health and safety, and environmental protection.

(ii) “A performance based approach” to regulatory decision making represents a philosophy whereby performance standards are established that must be achieved by the licensee, but provides flexibility to the licensee as to the means of meeting those standards. This approach emphasizes results over process and methods and uses those results as the primary basis for regulatory decision-making. This approach incorporates the following attributes:

(A) Measurable (or calculable) parameters (i.e., direct measurements of the physical parameter of interest or of related parameters that can be used to calculate the parameter of interest) that exist to monitor a system, including facility and licensee performance;

(B) Objective criteria to assess performance are established based on risk insights, deterministic analysis, and performance history;

(C) Flexibility for licensees to determine how to meet the established performance criteria in ways that will encourage and reward improved outcomes; and

(D) Failure to meet a performance criterion, while undesirable, will not in

and of itself constitute or result in an immediate safety concern.

(b) As part of the risk informed performance based regulatory approach, the Department shall utilize risk insight, engineering analysis and judgment, including the principle of defense-in-depth and incorporation of safety margins, and performance history to:

- (i) Focus attention on the areas of greatest potential significance to human health, safety, and the environment;
- (ii) Establish objective criteria for evaluating performance;
- (iii) Develop measurable or calculable parameters for monitoring system and license performance;
- (iv) Provide flexibility to licensees to determine how to meet the established performance criteria in a way that will encourage and reward outcomes; and
- (v) Focus on the results as the primary basis for regulatory decisions.

Section 4. Changes, Tests, or Experiments.

(a) Subject to the conditions in Section 4(b) of this Chapter and without obtaining a license amendment pursuant to Chapter 4 of these rules, a licensee may:

- (i) Make changes to the components of the licensed facility, which have a nexus to licensed material described in the most updated license application;
- (ii) Make changes in the procedures as described in the most updated license application involving licensed material; and
- (iii) Conduct tests or experiments not described in the most updated license application involving licensed material.

(b) The licensee shall obtain a license amendment pursuant to Chapter 4 of these rules prior to implementing a proposed change, test, or experiment if the change, test, or experiment would result in or create the following:

- (i) More than a minimal increase in the frequency of occurrence of an accident involving licensed materials, previously evaluated in the most updated license application;
- (ii) More than a minimal increase in the likelihood of occurrence of a malfunction of facility structure equipment, or monitoring system (SEMS) important to licensed material safety previously evaluated in the most updated license application;
- (iii) More than a minimal increase in the consequence of an accident involving licensed material previously evaluated in the most updated license application;
- (iv) More than a minimal increase in the consequences of a malfunction of a SEMS important to licensed material safety previously evaluated in the most updated license

application;

(v) A possibility for a credible and potentially significant accident scenario of a different type, involving licensed material, than any previously evaluated in the most updated license application;

(vi) A possibility for a malfunction of a SEMS important to licensed material safety with a different result than previously evaluated in the most updated license application; and

(vii) A departure from the method of evaluation of radiological safety described in the most updated license application used by the Department. For NRC licenses transferred and recognized by the Department, a departure from the method of evaluation of radiological safety discussed in the NRC's final safety evaluation report (SER), any federal environmental impact statement (EIS) or environmental assessment (EA), technical evaluation reports (TER), or other analyses and evaluation for license amendments.

(c) For purposes of this Chapter, and as applied to NRC licenses recognized by the Department, SEMS means any SEMS which have been referenced in an NRC SER, TER, EA, or EIS, including supplements and amendments thereof.

(d) Licensees must obtain a license amendment unless the change, test, or experiment is consistent with the Department's and NRC's previous conclusions pertaining to radiological safety, or the basis of, or analysis leading to, the conclusion of actions, designs, or design configuration analyzed and selected in the site or facility's SER, TER, and EIS, or EA performed by the NRC. This would include all supplements and amendments, and TERs, EAs, and EISs issued with amendments to a license. NRC's previous conclusions would include, but would not be limited to Regulatory Issues Summaries (RIS), executive orders, or information notices.

Section 5. Safety and Environmental Review Panel.

(a) Each licensee shall develop a Safety and Environmental Review Panel (SERP). The SERP's purpose is to evaluate changes to the license application, procedures, or physical processes to the criteria in Section 4 of this Chapter and determine if the action can be completed without a license amendment.

(b) The SERP shall consist of, at a minimum, the following three members that are employees of the licensee:

(i) One member having expertise in management (e.g., Plant Manager). This member shall be responsible for financial approval for changes;

(ii) One member having expertise in operations or construction. This member shall have responsibility for implementing any operational changes; and

(iii) One member that is the licensee's radiation safety officer (RSO) or equivalent. This member shall maintain the responsibility of assuring changes conform to radiation safety and environmental requirements. The Department may approve a qualified contractor to fulfill this role where circumstances prevent the licensee from utilizing a qualified employee.

Department approval must be obtained in writing.

(c) Additional members of the SERP may include, as appropriate, individuals to address and assist with technical aspects such as ground or surface water hydrology, specific earth sciences, or other technical disciplines. Temporary or permanent members, other than the three above-specified individuals, may be consultants or contractors.

(d) The licensee shall maintain records of any changes made pursuant to this Chapter until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with Section 4 of this Chapter. The licensee shall furnish, in an annual report to the Department, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each made pursuant to this Chapter. In addition, the licensee shall annually submit to the Department any changed pages, which shall include both a change indicator for the area changed (i.e., a bold line vertically drawn in the margin adjacent to the portion actually changed), and a page change identification (date of change or change number), to the Operations Plan and Reclamation Plan of the most updated approved license application to reflect changes made under this condition.

(e) All SERP evaluations shall be made available to the Department during site inspections. The Department may review all the SERP evaluations to ensure that it concurs with the conclusions. In events where the Department disagrees with the conclusions of a SERP, an amendment application will be required. The Department may take enforcement action or issue penalties as necessary relative to the SERP evaluations.

Section 6. Contents of a SERP Evaluation.

(a) The evaluation through the SERP process must answer the items presented in Sections 4(b) and 4(c) of this Chapter. For each item the evaluation shall present their justification and this document shall be reviewed by the Department at the time of inspection for concurrence. Certain items within Section 4 of this Chapter may require a risk assessment to be performed to determine the significance of an event. Those risk assessments will be reviewed by the Department at the time of the inspection.

Section 7. Exclusions to the SERP Process.

(a) The following items shall not be approved through the SERP process and shall be sent to the Department as a license amendment for approval:

- (i) Amending license conditions; and
- (ii) Changes to license boundary.

Chapter 9

Transportation of Radioactive Material

Section 1. Purpose.

(a) This Chapter establishes requirements for packaging, preparation for shipment, and transportation of licensed material.

(b) The packaging and transport of licensed material are also subject to the Wyoming Environmental Quality Act, Wyoming Statute § 35-11-2001 *et seq.* the Program's rules and regulations, and the regulations of other federal agencies (such as the U.S. Department of Transportation, the U.S. Postal Service, and the Commission) having jurisdiction over means of transport. The requirements of this Chapter are in addition to, and not in substitution for, other applicable requirements.

Section 2. Scope.

(a) This Chapter applies to any licensee authorized by specific or general license issued by the Department to acquire, own, possess, use, transfer, offer or receive for transport, or dispose of licensed material, if the licensee delivers that material to a carrier for transport, transports the material outside the site of usage as specified in the license, or transports that material on public highways. No provision of this Chapter allows for the unauthorized possession of licensed material.

Section 3. Incorporation by Reference (IBR) of 10 Code of Federal Regulations (C.F.R.) Part 71; Packaging and Transportation of Radioactive Material.

(a) The Department fully adopts and hereby incorporates by reference 10 C.F.R. Part 71, §§ 71.0 through 71.137, revised as of January 1, 2025, including all sections and any notes and appendices therein, unless expressly provided otherwise in these rules. The U.S. Department of Transportation's regulations, as cited in 10 C.F.R. § 71.5 (January 1, 2025), are also fully adopted and hereby incorporated by reference. These rules do not include any later amendments or editions of the incorporated matter.

(b) The following 10 C.F.R. sections, including all subparts, as of January 1, 2025 are excluded from these rules and are not incorporated by reference: 71.0, 71.1, 71.2, 71.6, 71.7, 71.9, 71.11, 71.12, 71.13, 71.14(b), 71.15, 71.16, 71.18, 71.19, 71.22, 71.23, 71.24, 71.25, 71.31, 71.33, 71.35, 71.37, 71.38, 71.39, 71.41, 71.43, 71.45, 71.51, 71.53, 71.55, 71.57, 71.59, 71.61, 71.63, 71.64, 71.65, 71.70, 71.71, 71.73, 71.74, 71.75, 71.77, 71.81, 71.83, 71.85(a)-(c), 71.87(g), 71.88, 71.91(a)(5), 71.91(a)(7), 71.91(b), 71.95, 71.97, 71.99, 71.100, 71.101(c)(2), 71.101(d), 71.101(e), 71.101(g), 71.107, 71.109, 71.111, 71.113, 71.115, 71.117, 71.119, 71.121, 71.123, and 71.125.

(c) The terms "Close reflection by water," "Critical Safety Index," "Containment System," "Deuterium," "Fissile material," "Graphite," "Maximum normal operating pressure," "Optimum interspersed hydrogenous moderation," "Special Form," "Spent nuclear fuel" or

"Spent fuel," "State," "Depleted uranium," and "Enriched uranium" as defined in 10 CFR § 71.4 as of January 1, 2025 are excluded from these rules and are not incorporated by reference.

(d) Any references in the federal rules adopted by reference to the United States Nuclear Regulatory Commission (NRC), or any component thereof, shall be deemed to be a reference to the Department and the Source Material Program, with the following exceptions:

(i) When used in 10 C.F.R. §§ 71.5(b) and 71.10, 71.17(c)(3), 71.17(e), 71.85(c), and 71.93(c); and

(ii) The definitions of "certificate holder" and "certificate of compliance (CoC)" in 10 C.F.R. 71.12.

(e) If, for any reason, the U.S. Department of Transportation's regulations are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of 49 CFR Parts 171 through 180 appropriate to the mode of transport to the same extent as if the shipment was subject to these regulations.

(f) A request for modification, waiver, or exemption from the requirements in 49 C.F.R. Parts 171 through 180, and any notification referred to in those requirements, must be filed with, or made to, the Department.

Chapter 1

General Provisions

Section 1. Authority.

(a) These rules and regulations are promulgated pursuant to the Wyoming Environmental Quality Act, Wyoming Statute (W.S.) § 35-11-2001 et seq. These rules and regulations are effective upon filing with the Secretary of State.

Section 2. Purpose.

(a) It is the purpose of these rules to state such requirements as shall be applied in the use of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content (referred to throughout these rules as licensed material) such that the Department can ensure the protection of the public health and safety to all persons at, or in the vicinity of, the place of use, storage, or disposal.

Section 3. Scope.

(a) Except as otherwise specifically provided, these rules apply to all persons who receive, possess, use, offer and receive for transfer, own, or acquire any source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content. For the purposes of these rules, the term “mineral resources” is defined in W.S. § 35-11-2001(a). Nothing in these rules shall apply to any person to the extent such person is subject to regulation not relinquished by the United States Nuclear Regulatory Commission (NRC). These rules do not govern the mining or removal of source material in its natural state or independent or commercial laboratory facilities that possess, use, or accept source material. These rules apply to laboratories located at facilities licensed under these regulations.

Section 4. Incorporation by Reference (IBR) of Code of Federal Regulations (C.F.R.)

(a) AVAILABILITY OF REFERENCED MATERIAL. The federal rules adopted by reference throughout these rules are maintained at the following locations:

(i) Electronic copies of the federal rules adopted by reference throughout these rules may be obtained from the U.S. Government Printing Office, <http://www.ecfr.gov>; and

(ii) Volumes of the federal rules adopted by reference throughout these rules are available for public inspection at the Wyoming Department of Environmental Quality, Source Material Program, 200 West 17th Street, Suite 10, Cheyenne, Wyoming 82002. Printed copies of the federal rules adopted by reference throughout these rules are also available at cost from the U.S. Government Printing Office, 732 North Capitol Street Northwest, Washington D.C. 20401 or at <http://bookstore.gpo.gov/catalog/laws-regulations/code-federal-regulations-cfrs-print>. Copies of the federal rules adopted by reference throughout these rules may be requested at cost through the Wyoming Department of Environmental Quality, which will order

the materials from the U.S. Government Printing Office.

Section 5. Definitions.

The following terms, as used in these rules and regulations shall, unless the context otherwise requires, have the following meanings:

(a) "Absorbed Dose" means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the rad and the gray (Gy).

(b) "Act" means Environmental Quality Act, W.S. § 35-11-103 et seq.

(c) "Action Limits" means the minimum and maximum values of a quality assurance measurement that can be interpreted as representing acceptable performance with respect to the parameter being tested. Values less than the minimum or greater than the maximum action limit or level indicate that corrective action must be taken. Action limits or levels are also sometimes called control limits or levels.

(d) "Activity" means the rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).

(e) "Adult" means an individual 18 or more years of age.

(f) "Agreement State" means a state with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under Section 274(b) of the Atomic Energy Act of 1954 (AEA), as amended (42 U.S.C. § 2021). Non-agreement State means any other State.

(g) "Airborne Radioactive Material" means a radioactive material dispersed in the air in the form of dusts, fumes, particulates, mists, vapors, or gases.

(h) "Airborne Radioactivity Area" means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exists in concentrations:

(i) In excess of the derived air concentrations (DACs), specified in 10 C.F.R. Part 20, Appendix B, or

(ii) To such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI), or 12 DAC hours.

(i) "Air-Purifying Respirator" means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

(j) "Alert" means events may occur, are in progress, or have occurred that could lead to a release of radioactive material but that the release is not expected to require a response by off-site response organizations to protect persons off-site.

(k) "Annual Limit on Intake (ALI)" means the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the reference man that would result in a committed effective dose equivalent of 5 rems (0.05 Sv) or a committed dose equivalent of 50 rems (0.5 Sv) to any individual organ or tissue. (ALI values for intake by ingestion and by inhalation of selected radionuclides are given in Table 1, Columns 1 and 2, of Appendix B to 10 CFR Part 20).

(l) "As Low as (is) Reasonably Achievable (ALARA)" means making every reasonable effort to maintain exposures to radiation as far below the dose limits as is practical, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

(m) "Assigned Protection Factor (APF)" means the expected workplace level of respiratory protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

(n) "Atmosphere-Supplying Respirator" means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARS) and self-contained breathing apparatus (SCBA) units.

(o) "Background Radiation" means radiation from:

(i) Cosmic sources;

(ii) Naturally occurring radioactive materials, including radon (except as a decay product of source or special nuclear material); and

(iii) Global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee.

(iv) Background radiation does not include radiation from source, byproduct, or special nuclear materials regulated by the Commission.

(p) "Becquerel (Bq)" means the SI unit of activity. One (1) becquerel is equal to one (1) disintegration or transformation per second.

(q) "Bioassay" means the determination of kinds, quantities or concentrations, and in some cases, the locations of radioactive material in the human body, whether by direct measurement (in vivo counting) or by analysis and evaluation of materials excreted or removed from the human body. For purposes of these rules, "radiobioassay" is an equivalent term.

(r) "Byproduct Material" is defined in W.S. § 35-11-103(j)(i).

- (s) "Calibration" means the determination of:
- (i) The response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or
 - (ii) The strength of a source of radiation relative to a standard.
- (t) "Class (or lung class or inhalation class)" means a classification scheme for inhaled material according to its rate of clearance from the pulmonary region of the lung. Materials are classified as D, W, or Y, which applies to a range of clearance half-times; for Class D (Days) of less than 10 days, for Class W (weeks) from 10 to 100 days, and Class Y (years) of greater than 100 days.
- (u) "Collective Dose" means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.
- (v) "Commencement of Construction" means taking any action defined as construction or any other activity at the site of a facility subject to these rules that has a reasonable nexus to radiological health or safety.
- (w) "Commission" means the U.S. Nuclear Regulatory Commission or its duly authorized representatives. "Nuclear Regulatory Commission" and "NRC" are equivalent terms.
- (x) "Committed Dose Equivalent ($H_{T,50}$)" means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.
- (y) "Committed Effective Dose Equivalent ($H_{E,50}$)" is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($H_{E,50} = \sum W_T H_{T,50}$).
- (z) "Constraint (dose constraint)" means a value above which specified licensee actions are required.
- (aa) "Contamination" means the presence of radioactive substance on a surface in quantities in excess of unrestricted release limits.
- (i) Fixed radioactive contamination means radioactive contamination that cannot be removed from a surface during normal conditions.
 - (ii) Non-fixed or removable radioactive contamination means radioactive contamination that can be removed from a surface during normal conditions.
- (ab) "Controlled Area" means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason.
- (ac) "Critical Group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(ad) "Curie" means the special unit of activity. One curie is equal to 3.7×10^{10} disintegrations per second which is equal to 3.7×10^{10} becquerels which is equal to 2.22×10^{12} disintegrations per minute.

(ae) "Declared Pregnant Woman" means a woman who has voluntarily informed the licensee, in writing, of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

(af) "Decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:

- (i) Release of property for unrestricted use and termination of the license; or
- (ii) Release of the property under restricted conditions and termination of the license.

(ag) "Deep Dose Equivalent (H_d)," which applies to external whole body exposure, means the dose equivalent at a tissue depth of 1cm (1000 mg/cm^2).

(ah) "Demand Respirator" means an atmosphere-supplying respirator that admits breathing air to the facepiece only when negative pressure is created inside the facepiece by inhalation.

(ai) "Department" means the State of Wyoming Department of Environmental Quality.

(aj) "Derived Air Concentration (DAC)" means the concentration of given radionuclide in air which, if breathed by reference man for a working year of 2,000 hours under conditions of light work (inhalation rate of 1.2 cubic meters of air per hour), results in an intake of 1 ALI. DAC values are given in 10 C.F.R. Part 20, Appendix B, Table 1 Column 3.

(ak) "Derived Air Concentration–Hour (DAC-Hour)" means the product of the concentration of radioactive material in air (expressed as a fraction or multiple of the derived air concentration for each radionuclide) and the time of exposure to that radionuclide, in hours. A licensee may take 2,000 DAC-hours to represent 1 ALI equivalent to a committed effective dose equivalent of 5 rems (0.05 Sv).

(al) "Discrete source" means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

(am) "Disposable Respirator" means a respirator for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent exhaustion, physical damage, or end of service life renders it unsuitable for use. Examples of this type of respirator are disposable half-mask respirators or disposable escape-only self-contained breathing apparatus (SCBA).

(an) "Distinguishable from Background" means that the detectable concentration of a

radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

(ao) "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent. For purposes of these rules, "radiation dose" is an equivalent term.

(ap) "Dose Equivalent (H_T)" means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the rem and sievert (Sv).

(aq) "Dose Limits" means the permissible upper bounds of radiation doses established in accordance with these rules. For purpose of these rules, "limits" is an equivalent term.

(ar) "Dosimetry Processor" means an individual or organization, that is National Voluntary Laboratory Accreditation Program (NAVLAP) approved, that processes and evaluates individual monitoring equipment in order to determine the radiation dose delivered to the equipment.

(as) "Effective Dose Equivalent (H_E)" means the sum of the products of the dose equivalent to the organ or tissue (H_T), and the weighting factor (W_T), applicable to each of the body organs or tissues that are irradiated ($H_E = \sum W_T H_T$).

(at) "Embryo/Fetus" means the developing human organism from conception until the time of birth.

(au) "Entrance or Access Point" means any location through which an individual could gain access to radiation areas or to licensed radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

(av) "Exclusive Use" means the sole use by a single consignor or a conveyance for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. The consignor and the carrier must ensure that any loading or unloading is performed by personnel having radiological training and resources appropriate for safe handling of the consignment. The consignor must issue specific instructions, in writing, for maintenance of exclusive use shipment controls, and include them with the shipping paper information provided to the carrier by the consignor.

(aw) "Exposure" means being exposed to ionizing radiation or to radioactive material. For purposes of these rules, this term is used as a verb.

(ax) "Exposure Rate" means the exposure per unit of time, such as roentgen per minute and milliroentgen per hour.

(ay) "External Dose" means that portion of the dose equivalent received from a source of radiation outside the body.

(az) "Extremity" means hand, elbow, arm below the elbow, foot, knee, and leg below the knee.

(ba) "Financial Assurance" means the method of assuring that sufficient funds will be available at the time of license termination and decommissioning of the facility to cover all costs associated with the decommissioning.

(bb) "Filtering Facepiece (dust mask)" means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, not equipped with elastomeric sealing surfaces and adjustable straps.

(bc) "Fit Factor" means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

(bd) "Fit Test" means the use of protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

(be) "Generally Applicable Environmental Radiation Standards" means standards issued by the U.S. Environmental Protection Agency under the authority of the AEA, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

(bf) "Helmet" means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

(bg) "High Radiation Area" means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv), in 1 hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

(bh) "Hood" means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

(bi) "Individual" means any human being.

(bj) "Individual monitoring" means:

(i) The assessment of dose equivalent by:

(A) Use of devices designed to be worn by an individual, or

(B) Survey data; or

(ii) The assessment of committed effective dose equivalent by:

(A) Bioassay, or

(B) By determination of the time-weighted air concentrations to which an individual has been exposed (i.e. DAC-hours).

(bk) "Individual Monitoring Devices" means devices designed to be worn by a single individual for the assessment of dose equivalent. For purposes of these rules, individual monitoring equipment and personnel monitoring equipment are equivalent terms. Examples of individual monitoring devices are film badges, thermoluminescence dosimeters (TLD's), pocket ionization chambers, and personal air sampling devices.

(bl) "Internal Dose" means that portion of the dose equivalent received from radioactive material taken into the body.

(bm) "Lens Dose Equivalent (LDE)" means the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm²).

(bn) "License" means a form of permission given by the Department to an applicant who has met the requirements for licensing set out in the Act and these rules.

(bo) "Licensee" means a person who is licensed by the Department in accordance with the Act and these rules.

(bp) "Licensed material" means source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content and the management and disposal of associated byproduct material received, possessed, used, transferred, or disposed of under a license issued by the Department.

(bq) "Limits (dose limits)" means the permissible upper bounds of radiation doses.

(br) "Loose Fitting Facepiece" means a respiratory inlet covering that is designed to form a partial seal with the face.

(bs) "Lost or Missing Licensed Material" means licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

(bt) "Member of the Public" means an individual except when that individual is receiving an occupational dose.

(bu) "Minor" means an individual less than 18 years of age.

(bv) "Monitoring" means the measurement of radiation levels, concentrations, surface area concentrations or quantities of radioactive material, and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of these rules, radiation monitoring and radiation protection monitoring are equivalent terms.

(bw) "Nationally tracked source" is a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Appendix E of 10 C.F.R. Part 20. In this context a sealed source is defined as radioactive material that is sealed

in a capsule or closely bonded, in a solid form and which is not exempt from regulatory control. It does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet. Category 1 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 1 threshold. Category 2 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 2 threshold but less than the Category 1 threshold.

(bx) "Negative Pressure Respirator (tight fitting)" means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

(by) "Nonstochastic Effect" means health effects, the severity of which varies with the dose and for which a threshold is believed to exist. Radiation-induced cataract formation is an example of a nonstochastic effect (also called a deterministic effect). For the purposes of these rules deterministic effects are equivalent terms.

(ca) "Occupational Dose" means the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or to radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. An Occupational dose does not include doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released under 10 C.F.R. Part § 35.75, from voluntary participation in medical research programs, or as a member of the public.

(cb) "Operation" means all of the activities, equipment, premises, facilities, structures, roads, rights-of-way, waste and refuse areas, storage and processing areas, and shipping areas used in the process of excavating or removing overburden and minerals from the affected land or for removing overburden for the purpose of determining the location, quality or quantity of a natural, mineral deposit or for the reclamation of affected lands.

(cc) "Person" means an individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, municipality or any other political subdivision of the State, or any interstate body or any other legal entity and any legal successor, representative, agent, or agency of the foregoing.

(cd) "Physician" means a medical doctor or doctor of osteopathy licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to prescribe drugs in the practice of medicine.

(ce) "Positive Pressure Respirator" means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

(cf) "Powered air-purifying respirator (PAPR)" means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

(cg) "Pressure Demand Respirator" means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

(ch) "Principal Activities" as used in these rules, means 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

(ci) "Program" means the State of Wyoming's Source Material Program.

(cj) "Public Dose" means the dose received by a member of the public from exposure to radiation or to radioactive materials released by a licensee, or to any other source of radiation under the control of a licensee. Public dose does not include occupational dose or doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released in accordance with 10 C.F.R. § 35.75, or from voluntary participation in medical research programs.

(ck) "Qualitative Fit Test (QLFT)" means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to a test agent.

(cl) "Quality factor (Q)" means the modifying factor, listed in Tables 1 of Section 7 of this Chapter and Table 1004(b).2 of 10 CFR 20.1004, that is used to derive dose equivalent from absorbed dose.

(cm) "Quantitative Fit Test (QNFT)" means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

(cn) "Quarter" means a period of time equal to one-fourth of the year observed by the licensee (approximately 13 consecutive weeks), providing that the beginning of the first quarter in a year coincides with the starting date of the year and that no day is omitted or duplicated in consecutive quarters.

(co) "Radiation" means alpha particles, beta particles, gamma rays, x-rays, neutrons, high speed electrons, high speed protons, and other particles capable of producing ions. For purposes of these rules, ionizing radiation is an equivalent term. Radiation, as used in these rules, does not include non-ionizing radiation, such as radio or microwaves, visible, infrared, or ultraviolet light.

(cp) "Radiation Area" means an area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 mSv), in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

(cq) "Radiation Level" means the radiation dose-equivalent expressed in millisieverts per hour or mSv/h (millirems per hour or mrem/h).

(cr) "Radioactivity" means the transformation of unstable atomic nuclei by the emission of radiation.

(cs) "Reference Man" means a hypothetical aggregation of human physical and physiological characteristics arrived at by international consensus. These characteristics may be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base.

(ct) "Residual Radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 C.F.R. Part 20 which is incorporated by reference in Chapter 3 of these rules.

(cu) "Respiratory Protective Device" means an apparatus, such as a respirator, used to reduce the individual's intake of airborne radioactive materials.

(cv) "Restricted Area" means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.

(cw) "Roentgen (R)" means the special unit of exposure. One roentgen equals 2.58×10^{-4} coulombs per kilogram of air. See exposure, defined above.

(cx) "Sanitary Sewerage" means a system of public sewers carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned and operated by the licensee.

(cy) "Self-Contained Breathing Apparatus (SCBA)" means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

(cz) "Shallow Dose Equivalent (H_s)" which applies to the external exposure of the skin of the whole body or the skin of an extremity and is taken as the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm^2).

(da) "SI" means an abbreviation of the International System of Units.

(db) "Site Area Emergency" means events which may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by off-site organizations to protect persons off-site.

(dc) "Site boundary" means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee.

(dd) "Source material" is defined in W.S. § 35-11-103(j)(iii).

(de) "Specific Activity" means the radioactivity of the radionuclide per unit mass of the nuclide. The specific activity of a material in which the radionuclide is essentially uniformly distributed is the radioactivity per unit mass of material. The Specific Activity for Natural Uranium is 6.77×10^{-7} Ci per gram of U.

(df) "Special Nuclear Material" means:

(i) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the 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

(ii) Any material artificially enriched by any of the foregoing but does not include source material.

(dg) "Stochastic Effects" means health effects that occur randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose without threshold. Hereditary effects and cancer incidence are examples of stochastic effects.

(dh) "Supplied-Air Respirator (SAR)" means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

(di) "Survey" means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. When appropriate, such an evaluation includes physical survey of the location of radioactive material and measurements or calculations of levels of radiation, or concentrations or quantities of radioactive material present.

(dj) "Test" means the process of verifying compliance with an applicable rule.

(dk) "Tight Fitting Facepiece" means a respiratory inlet covering that forms a complete seal with the face.

(dl) "Total Effective Dose Equivalent (TEDE)" means the sum of the effective dose equivalent for external exposures and the committed effective dose equivalent for internal exposures.

(dm) "Unrefined and Unprocessed Ore" means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining. Processing does not include sieving or encapsulation of ore or preparation of samples for laboratory analysis.

(dn) "Unrestricted Area" means an area, to which access is neither limited nor controlled by the licensee. For purposes of these rules, "uncontrolled area" is an equivalent term.

(do) "Unrestricted Use" means that the facility area, or object may be used by individuals for any purpose without limit or control of the licensee.

(dp) "User seal check (fit check)" means an action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

(dq) "Very High Radiation Area" means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from a radiation source or 1 meter from any surface that the radiation penetrates.

(dr) "Waste" means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purpose of this definition, low-level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in this Chapter.

(ds) "Week" means seven consecutive days starting on Sunday.

(dt) "Weighting Factor (W_T)" for an organ or tissue (T) is the proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of W_T are:

<u>Organ or Tissue</u>	<u>W_T</u>
<u>Gonads</u>	<u>0.25</u>
<u>Breasts</u>	<u>0.15</u>
<u>Red bone marrow</u>	<u>0.12</u>
<u>Lung</u>	<u>0.12</u>
<u>Thyroid</u>	<u>0.03</u>
<u>Bone Surfaces</u>	<u>0.03</u>
<u>Remainder</u>	<u>¹0.30</u>
<u>Whole Body</u>	<u>²1.00</u>

¹0.30 results from 0.06 for each 5 "remainder organs" (excluding the skin and the lens of the eye) that receive the highest doses.

²For the purposes of weighting the external whole body dose (for adding it to the internal dose), a single weighting factor, $W_T = 1.0$, has been specified. The use of weighting factors for external exposure will be approved on a case-by-case basis until such time as specific guidance is issued.

(du) "Whole Body" means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knees.

(dv) "Worker" means an individual engaged in work under a license issued by the Department and controlled by a licensee, but does not include the licensee.

(dw) "Working Level (WL)" means any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of 1.3×10^5 MeV of potential alpha particle energy. The short-lived radon daughters are: for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

(dx) "Working Level Month (WLM)" means an exposure to one working level for 170 hours. 2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month.

(dy) "Year" means the period of time beginning in January used to determine compliance with the provisions of these rules. The licensee may change the starting date of the year used to

determine compliance by the licensee provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

Section 6. Units of Exposure and Dose.

(a) As used in these rules, the unit of exposure is the coulomb per kilogram (C per kg). One roentgen is equal to 2.58×10^{-4} coulomb per kilogram of air.

(b) As used in these rules, the units of dose are:

(i) Gray (Gy) is the SI unit of absorbed dose. One gray is equal to an absorbed dose of one joule per kilogram. One gray equals 100 rad.

(ii) Rad is the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 erg per gram or 0.01 joule per kilogram. One rad equals 0.01 Gy.

(iii) Rem is the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor. One rem equals 0.01 Sv.

(iv) Sievert (Sv) is the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sievert is equal to the absorbed dose in gray multiplied by the quality factor. One Sv equals 100 rem.

(c) As used in these rules, the quality factors for converting absorbed dose to dose equivalent are shown in Table 1.

TABLE 1

Quality Factors and Absorbed Dose Equivalencies

<u>Type of Radiation</u>	<u>Quality Factor (Q)</u>	<u>Absorbed Dose Equal to a Unit Dose Equivalent</u>
<u>X, gamma, or beta radiation and high-speed electrons</u>	<u>1</u>	<u>1</u>
<u>Alpha particles, multiple-charged particles, fission fragments and heavy particles of unknown charge</u>	<u>20</u>	<u>0.05</u>
<u>Neutrons of unknown energy</u>	<u>10</u>	<u>0.1</u>
<u>High energy protons</u>	<u>10</u>	<u>0.1</u>

For the column in Table 1 labeled "Absorbed Dose Equal to a Unit Dose Equivalent," the absorbed dose in rad is equal to one rem or the absorbed dose in gray is equal to one Sv.

Section 7. Units of Radioactivity.

For purposes of these rules, activity is expressed in the SI unit of becquerel (Bq), or in the special unit of curie (Ci), or their multiples, or disintegrations or transformations per unit of time.

Section 8. Communication and Referenced Materials.

All communication and reports concerning parts of these rules, and application filed thereunder, should be addressed to the Department.

Section 9. Deliberate misconduct.

(a) No person may do any of the following:

(i) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant under these rules to be in violation of any rule or order of the Department; or any term, condition or limitation of any license issued by the Department under this Chapter; or

(ii) Deliberate misconduct by a person means an intentional act or omission that the person knows:

(A) Would cause a licensee to be in violation of any rule, regulation, or order; or any term, condition, or limitation issued by the Department; or

(B) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor or subcontractor of a licensee as mandated by the Department.

(b) A person who violates paragraph (a)(i) or (a)(ii) of this section may be subject to enforcement action in accordance with Chapter 2 of these rules.

(c) Deliberately submit to the Department any information that the person knows to be incomplete or inaccurate. This includes licensees, applicants, and contractors and subcontractors to licensees and applicants.

Section 10. Exemptions.

(a) The Department may upon application or upon its own initiative, grant such exemptions or exception from requirements as it determines are authorized by law and will not result in undue hazard to public health and safety or property. Provisions for exceptions are provided for in W.S. § 35-11-2003(c).

(b) Except to the extent that the Department of Energy's (DOE) facilities or activities, subject to licensing pursuant to Section 202 of the Energy Reorganization Act of 1974 (42 U.S.C. § 5842.), are involved, any prime contractor of the DOE is exempt from the requirements for a license set forth in 62, 63, and 64 of the Act (42 U.S.C. § 2111 and 42 U.S.C. § 2112) and from these rules to the extent that such contractor, under his prime contract with the DOE

manufactures, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material for:

(i) The performance of work for the DOE at a United States Government owned or controlled site, including the transportation of source material to or from such site and the performance of contract services during temporary interruptions of such transportation;

(ii) Research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof; or

(iii) The use or operation of nuclear reactors or other nuclear devices in a United States Government owned vehicle or vessel.

(iv) In addition to the foregoing exemptions, and subject to the requirement for licensing of DOE facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1980, any prime contractor or subcontractor of the DOE or the Nuclear Regulatory Commission is exempt from the requirements for a license set forth in sections 62, 63, and 64 of the Act and from the regulations in this Chapter to the extent that such prime contractor or subcontractor receives, possesses, uses, transfers or delivers source material under his prime contract or subcontract when the Department determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

(c) The Department fully adopts and hereby incorporates by reference the exemption in 10 C.F.R. 40.12(a) for common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service.

(d) The Department fully adopts and hereby incorporates by reference the requirements for unimportant quantities of source material in 10 C.F.R. 40.13, along with the exclusion of 40.13(c)(5)(iv).

Section 11. Records.

(a) A licensee shall maintain records showing the receipt, transfer, and disposal of all licensed material.

(b) All records required by this Chapter shall be accurate and factual.

(c) The Department fully adopts and hereby incorporates by reference recordkeeping requirements in 10 C.F.R. 40.61 (a), (b), (d), (e), and (f).

(d) If the record retention period is not specified, the record shall be maintained for a period of three years.

Chapter 2

Inspections, Enforcement, and Penalties

Section 1. Purpose.

This Chapter establishes requirements to ensure the protection of the public health and safety and of all persons at, or in the vicinity of, the place of use, storage, or disposal of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content.

Section 2. Scope.

This Chapter applies to the authorized and unauthorized extraction or concentration of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content. The Department may inspect, enforce, and penalize both licensees and non-licensees for the unlawful possession, use, transfer, ownership or other such unpermitted handling of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content in accordance with these rules, the Act, and applicable state and federal laws.

Section 3. Inspections and Testing.

(a) Each licensee and applicant shall obtain, afford, and grant access to the Department, at all reasonable times, the opportunity to inspect licensed material, facilities, premises, and records to ensure compliance with these rules, the Act, licensing conditions, and other applicable state and federal laws.

(b) As required by the Department, each licensee shall perform, or shall permit the Department to perform, such reasonable tests as the Department deems appropriate or necessary including, but not limited to, the testing of:

(i) Source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content;

(ii) Facilities wherein licensed materials are used or stored; and

(iii) Radiation detection and monitoring instruments.

Section 4. Violations.

(a) All violations of this Act or these rules are subject to penalty as provided by Wyoming Statute (W.S.) § 35-11-901.

(b) An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or these rules.

(c) Submittal of false information shall be sufficient basis for rejecting or revoking any

Department issued license, registration, certification or other acceptance, approval or permit.

(d) These rules and regulations shall not limit any existing civil or criminal remedies in accordance with W.S. §. 35-11-904.

Section 5. Enforcement.

(a) The Department may issue Notices of Violation and Orders pursuant to W.S. § 35-11-701.

(b) Licensee initiative for self-identification and correction of problems is encouraged. The Department will generally not issue Notices of Violation for a violation that:

(i) Was identified by the licensee;

(ii) Results in low or no health and safety consequences;

(iii) Was documented, in writing, for review by the Department;

(iv) Was or will be corrected, including measures to prevent recurrence, within ninety (90) days, or another time frame approved by the Department; and

(v) Was not a violation that could reasonably be expected to have been prevented by the licensee's corrective action for a previous violation.

(c) Licensees are not ordinarily cited for violations resulting from matters outside of their control, such as equipment failures that were not avoidable by reasonable quality assurance measures. However, licensees are held responsible for acts of their employees. Accordingly, the rules should not be construed to excuse personnel errors.

(d) At the discretion of the Department, and in accordance with W.S. § 35-11-701, licensees may have the opportunity to eliminate or correct the violation before the issuance of a Notice of Violation if that violation results in low or no health and safety consequences and can be eliminated or corrected in an expedient manner.

Section 6. Orders and other Administrative Actions.

(a) The Department may issue Orders:

(i) To remove a threat to public health and safety or the environment;

(ii) To demand that a Licensee or other person cease and desist violations or unauthorized or illegal activities; or

(iii) For any other reason in which license revocation or suspension is authorized.

(b) The Department may issue Orders to suspend all or part of any regulated activity.

These Orders may be effective immediately, without prior opportunity for hearing, whenever it is determined that public health, interest, or safety so requires, or when responding to a willful or wanton violation.

(c) The Department may hold informal enforcement or settlement conferences to discuss safety, public health, or environmental problems, compliance with regulatory requirements, proposed corrective measures including schedules for implementation, and enforcement.

Chapter 3

Radiation Protection Standards

Section 1. Purpose.

(a) This Chapter establishes standards for protection against ionizing radiation resulting from activities conducted pursuant to licenses issued by the Department.

(b) This Chapter is designed to control the receipt, possession, use, transfer, or disposal of licensed material such that the total dose to an individual, excluding radiation dose from background sources, does not exceed the standards for protection against radiation as outlined in this Chapter.

(c) The limits provided for in this Chapter do not apply to doses due to background, from medical diagnosis or therapy, from individuals administered radioactive material and released, or from voluntary participation in medical research.

Section 2. Scope.

This Chapter applies to persons licensed by the Department to acquire, own, possess, use, transfer, offer or receive for transport, or dispose of source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content.

Section 3. Implementation.

Any existing license condition imposed by the Department that is more restrictive than this Chapter remains in force until there is an amendment or renewal of the license.

Section 4. Incorporation by Reference of 10 Code of Federal Regulations (C.F.R.) Part 20; Standards for Protection Against Radiation.

(a) Any reference in these rules to requirements, or procedures contained in 10 C.F.R., Part 20, Sections 20.1001 through 20.2402 shall constitute the full adoption by reference of that part and subparts as they appear in 10 C.F.R., revised as of January 1, 2025, including any notes and appendices therein, unless expressly provided otherwise in these rules. These rules do not include any later amendments or editions of the incorporated matter.

(b) The following 10 C.F.R. sections, as of January 1, 2025, are excluded from these rules and are not incorporated by reference: 20.1001, 20.1002, 20.1003, 20.1004(a), 20.1005, 20.1006, 20.1007, 20.1008, 20.1009, 20.1206, 20.1301(c) and (e), 20.1406(b), 20.1601(f), 20.1903(b), 20.1903(d), 20.1905(g), 20.2003(b), 20.2104 (b), 20.2105, 20.2202(e), 20.2203(c), 20.2204, 20.2206, 20.2401, 20.2402, and Appendix D.

(c) Any references in the federal rules adopted by reference to “NRC Headquarters

Operations Center,” or any component thereof, in 10 C.F.R. Part 20 shall be deemed to be a reference to the Department and the Source Material Program.

(d) Any references in the federal rules adopted by reference to the United States Nuclear Regulatory Commission (NRC), or any component thereof, shall be deemed to be a reference to the Department and the Source Material Program.

(e) Any reference in the federal rules to 10 C.F.R. Parts 50, 52, 54, 60, 63, 72, and 76 are not adopted under the incorporation by reference of 10 C.F.R. Part 20.

(f) When incorporating 10 CFR 20.1406(a), any references to 10 CFR Part 52 are not incorporated by reference.

(g) Any reference in the federal rules adopted by reference to “Form 4” shall be deemed a reference to the Department Form 4.

Chapter 4

Licensing Requirements for Source Material

Section 1. Purpose.

(a) This Chapter establishes the criteria for issuance and terms of conditions upon which the Department may issue licenses to receive title to, acquire, own, possess, use, transfer, offer or receive for transport, or deliver any licensed material. This Chapter also governs the operation of facilities for handling and disposing of licensed material. This Chapter also provides requirements for decommissioning of licensed facilities. Unless otherwise specified, the requirements of this Chapter are in addition to, and not in substitution for, other applicable requirements of these rules.

Section 2. Scope.

(a) This Chapter establishes performance objectives and procedural requirements applicable to any licensee. This Chapter also applies to waste systems for licensed material, including specific technical and financial requirements for siting, construction, operation, monitoring, decontamination, and decommissioning of licensed facilities, as well as requirements for licensee transfer and termination.

(b) A person subject to the regulations of this Chapter may not receive title to, acquire, own, possess, use, transfer, offer or receive for transport, or deliver or dispose of licensed material, after removal from its place of deposit in nature, unless authorized in a general or specific license issued by the Department pursuant to this Chapter.

Section 3. Incorporation by Reference.

(a) The Department fully adopts and hereby incorporates by reference 10 CFR 40.2(a), 40.21, 40.22, 40.41 (a) and (b), 40.42(g)(5), 40.51, 40.54, 40.55, and 61.55, 61.56, and 61.57 revised as of January 1, 2025. These rules do not include any later amendments or editions of incorporated matter.

(b) The following 10 C.F.R. portions, including all subparts, as of January 1, 2025 are excluded from these rules and are not incorporated by reference: 40.22(b)(4) and 40.51(b)(6).

(c) The Department fully adopts and hereby incorporates by reference 10 CFR 150.20 revised as of January 1, 2025. These rules do not include any later amendments or editions of incorporated matter.

Section 4. Deliberate Misconduct.

(a) Any licensee, applicant for a license, employee of a licensee or applicant, or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any component, equipment, materials, or other goods or

services that relate to a licensee's or applicant's activities in part, may not:

(i) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Department.

(ii) Deliberately submit to the Department, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor information known to be materially incomplete or inaccurate.

(b) The Department may bring an enforcement action against any person who violates subparagraphs (a)(i) or (a)(ii) of this section, per Chapter 2 of these rules.

Section 5. Filing an Application for a Specific License.

(a) Two copies of the application for a specific license shall be mailed, or sent electronically as approved by the Administrator, to the Department accompanied with the license application fee, as described in Wyoming Statute (W.S.) § 35-11-2003 and Chapter 7 of these rules, to:

Wyoming Department of Environmental Quality
Land Quality Division
200 W. 17th Street, Suite 10
Cheyenne, WY 82002

(b) An application for a specific license, and copies thereof, shall be presented in a clean and orderly manner, as determined appropriate by the Department. Hard copies of specific license applications shall be bound, with the use of a three ring binder or comparable, such that the information is easily accessible, and pages are not misplaced.

(c) Information provided by an applicant or licensee to the Department shall be complete and accurate in all material respects.

(d) Each applicant or licensee shall notify the Department of information identified by the applicant or licensee as having, for the regulated activity, a significant implication for public health and safety. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Department of information that the applicant or licensee has identified as having a significant implication for public health and safety. This requirement is not applicable to information which is already required to be provided to the Department by other reporting requirements.

Section 6. Exemptions from Regulatory Requirements.

(a) Any person is exempt from this Chapter to the extent that such person receives title to, acquires, owns, possesses, uses, or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than one-twentieth of one percent (0.05 percent) of the mixture, compound, solution, or alloy. The exemption contained in this paragraph does not apply to Australian-obligated source material, nor does it include byproduct materials as defined in these rules.

(b) Any person is exempt from this Chapter to the extent that such person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material provided that, except as authorized in specific license, such person shall not refine or process such ores.

(c) Any person is exempt from this Chapter to the extent that such person receives title to, acquires, owns, possesses, uses, or transfers rare earth metals and compounds, mixtures, and products containing not more than 0.25 percent by weight thorium, uranium, or any combination of these.

(d) No person may introduce source material into a product or material either knowing or having reason to believe that it will be transferred to persons exempt under this Chapter.

(e) The Department may, upon its own initiative or the application of an interested person, grant such exemptions from the requirements of this Chapter as authorized by law and, as determined by the Department, will not endanger life, property, and is otherwise in the public interest.

(f) Common and contract carriers, freight forwarders, warehousemen, and the United States Postal Service are exempt from the requirements of this Chapter and the requirements set forth in Section 62 of the Atomic Energy Act of 1954, 42 U.S.C. §§ 2011 *et seq.*, as amended to the extent that they transport or store source material in the regular course of carriage for another or storage incident thereto.

(g) Except to the extent that the Department of Energy's (DOE) facilities or activities, subject to licensing pursuant to Section 202 of the Energy Reorganization Act of 1974 (42 U.S.C. § 5842.), are involved, any prime contractor of the DOE is exempt from the requirements for a license set forth in 62, 63, and 64 of the Act (42 U.S.C. § 2111 and 42 U.S.C. § 2112) and from this Chapter to the extent that such contractor, under his prime contract with the DOE manufactures, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material for:

(i) The performance of work for the DOE at a United States Government owned or controlled site, including the transportation of source material to or from such site and the performance of contract services during temporary interruptions of such transportation;

(ii) Research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof; or

(iii) The use or operation of nuclear reactors or other nuclear devices in a United States Government owned vehicle or vessel.

(iv) In addition to the foregoing exemptions, and subject to the requirement for licensing of DOE facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1980, any prime contractor or subcontractor of the DOE or the Nuclear Regulatory Commission is exempt from the requirements for a license set forth in sections 62, 63, and 64 of the Act and from the regulations in this Chapter to the extent that such prime contractor or subcontractor receives, possesses, uses,

transfers or delivers source material under his prime contract or subcontract when the Department determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

(h) This Chapter shall not be deemed to authorize the import of radioactive material or products containing radioactive material.

Section 7. Pre-Licensing Construction.

(a) Except as provided in this Chapter, the applicant shall not commence construction at any plant or facility in which the licensed activity will occur until the Department has issued a license. Commencement of Construction, defined in Chapter 1 of these rules, prior to issuance of the license may be grounds for denial of a license.

(b) At a minimum, an application for a specific license to receive title to, acquire, own, possess, use, transfer, offer or receive for transport, and use licensed material shall be filed with the Department at least nine (9) months prior to the commencement of construction of any plant or facility in which the licensed activity will occur, and in accordance with existing applicable law.

Section 8. General Requirements for Issuance of Specific Licenses

(a) An application for a specific license may be approved if the Department determines that:

(i) The applicant is qualified by reason of training and experience, to use licensed material for the purpose requested in the subject application consistent with the governing statutes and rules and in such a manner as to minimize danger to public health and safety, or property;

(ii) The applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property;

(iii) The applicant satisfies the requirements listed in this Chapter;

(iv) The issuance of the license will not be detrimental to the health and safety of the public;

(v) The applicant is financially qualified to conduct the licensed activity, including any required decontamination, decommissioning, reclamation, or disposal; and

(vi) The applicant has satisfied the requirements of Chapter 6 of these rules.

(b) The Department may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Department to determine whether the application should be granted or denied or whether a license should be

modified or revoked. All applications and statements shall be signed by the applicant or a person duly authorized to act for and on his behalf.

(c) Upon determination that an application meets the requirements of the Act, applicable rules, and public health and safety considerations, the Department may issue a specific license authorizing the proposed activity in such form, and containing such conditions and limitations, as the Department deems appropriate or necessary.

(d) The Department may incorporate conditions or provisions in any license at the time of issuance, with respect to the licensee's receipt, possession, use, and transfer of licensed material subject to this Chapter as it deems appropriate or necessary in order to:

(i) Minimize danger to public health and safety, and the environment;

(ii) Require reports and recordkeeping, and to provide for such inspections of activities under the license as may be appropriate and necessary; and

(iii) Prevent loss or theft of licensed material subject to this Chapter.

(e) All licenses, whether issued by the Department, and the authorization to possess or utilize licensed material cannot be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of any license to any person unless the Department, after securing full information, determines the transfer is in accordance with the Act and these rules. Upon the transfer of an existing license, the new licensee shall comply with existing laws and license conditions. The Department may impose new license conditions to be complied with by the new licensee as it deems necessary. An application for transfer of license must include:

(i) The identity, technical and financial qualifications of the proposed transferee; and

(ii) Financial assurance for decommissioning information required by Chapter 6 of these rules.

(f) Each licensee pursuant to this Chapter shall confine use and possession of licensed material to the locations and purposes authorized in the license.

(g) Each licensee shall notify the Department in writing when the licensee decides to permanently discontinue all activities involving materials authorized under the license.

(h) Each licensee shall notify the Department in writing within seven (7) business days following the filing of voluntary or involuntary petition for bankruptcy under any Chapter of the United States Code (U.S.C.) by or against:

(i) The licensee;

(ii) An entity controlling the licensee, or listing the license or licensee as property of the estate as that term is defined in 11 U.S.C. § 101(14); or

(iii) An affiliate of the licensee as that term is defined in 11 U.S.C. § 101(2).

(i) The written notification of bankruptcy submitted to the Department shall identify the bankruptcy court in which the petition for bankruptcy was filed, the case number, and the date of filing.

(j) The licensee shall allow the Department, to enter and inspect any licensed area as provided by W.S. §§ 35-11-109(a)(iv), (v) and (vi). The licensee shall obtain for the Department the right to access and cross over private lands leading to or within a licensed area for inspection of regulated activities consistent with state law and these rules. The right to access and cross over private property shall be in writing, notarized, included in the application, and contain the following:

(i) The name of the landowner of the property to be accessed or crossed;

(ii) A legal description of the lands, using Public Land Survey System nomenclature that will be crossed during the inspection process;

(iii) A declarative statement from the landowner providing the Department permission to access the described private property for the inspection of regulated activities; and

(iv) The landowner's signature.

(v) In lieu of the foregoing, the licensee may provide the Department with an executed Department, Land Quality Division, Form 8 or a copy of the Surface Use Agreement clearly providing the Department the authority to access or cross over the subject private property.

Section 9. Specific Requirements for Issuance of Specific Licenses

(a) A specific license for source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content will be issued if the applicant submits to the Department a complete and accurate application that clearly demonstrates how the requirements and objectives of this Chapter are met.

(b) An application for a license, including applications for the amendment or renewal of an existing license, to receive, possess and use licensed material shall contain all information required under these rules and such material as the Department may deem necessary. The application shall, at a minimum, contain the following information:

(i) A description of the proposed project or action;

(ii) For new licenses, environmental data that includes the results of a one-year preoperational monitoring program;

(iii) For renewal of licenses, environmental data containing results of the operational monitoring program or monitoring required to be conducted if the facility was not in operation but in standby mode;

(iv) Site characteristics, including regional and site specific geology, topography, hydrology, and meteorology;

(v) Radiological and non-radiological impacts of the proposed project or action including waterway and groundwater impacts;

(vi) An assessment of the radiological and non-radiological impacts to the public health and the environment;

(vii) Consideration of the long-term impacts of the licensed activities;

(viii) A representative presentation of the physical, chemical, and radiological properties of the type of licensed material to be received, stored, processed, or disposed of;

(ix) An evaluation of the short-term and long-term environmental impacts of such receipt, storage, processing, or disposal;

(x) An analysis of the environmental, economic, social, technical, and other benefits of the proposed activities against environmental costs and social effects;

(xi) Environmental effects of accidents;

(xii) Decommissioning, decontamination, reclamation, and impacts of these activities;

(xiii) A closure plan to be included in the reclamation plan for decontamination, decommissioning, restoration, and reclamation of buildings of the licensed area to levels that would allow where applicable unrestricted use;

(xiv) Proposal of an acceptable form and amount of financial assurance in accordance with Chapter 6 of these rules;

(xv) Specifications for the emissions control; and

(xvi) Emergency response protocol.

(c) For applications for a new license or application for a license amendment to expand the licensed site, proof of mailed notification to the owner or owners of the property on which licensed material is recovered, stored, processed, or disposed of must be demonstrated to the Department. The applicant for a new license must demonstrate that the owner or owners of the property were sent by certified United States mail, notification from the applicant stating that:

(i) Licensed radioactive material will be recovered, stored, processed, or disposed on the property; and

(ii) Decommissioning by the Department, funded by a surety, or as directed by order may be required and performed on the licensed site even if the licensee is unable or fails

to decommission the licensed site as required by license.

(d) Environmental concerns outlined in subsection (b) of this section need to be resolved when the Department:

(i) Receives application for a new specific license or renewal of a specific license;

(ii) Receives an amendment request that would authorize or result in:

(A) A significant expansion of a site;

(B) A significant change in the type of releases;

(C) A significant increase in the amounts of releases;

(D) A significant increase in individual or cumulative occupational radiation exposure; or

(E) A significant increase in the potential for or consequences from radiological accidents.

(e) The Department may exempt an applicant or licensee from the requirement to submit additional environmental impact information on the determination that environmental concerns are addressed through information previously provided to the Department.

(i) In considering exemptions, the Department may request additional information to ensure that no significant environmental impacts will result from the proposed or licensed activity.

(f) The applicant shall provide written specification describing the means employed so that all airborne effluent releases are reduced to levels as low as is reasonably achievable (ALARA) during the operational phase of any project.

(g) During any one full year prior to submittal of a new application or an amendment to expand the licensed area or operations, the applicant or licensee shall conduct a preoperational monitoring program to provide complete baseline data on an in situ recovery or a conventional milling site describing its pre-operational environment condition.

(h) Throughout the construction and operating phases of the in situ recovery facility or conventional mill, the applicant or licensee shall conduct an operational monitoring program to measure or evaluate compliance with applicable standards and regulations, in order to evaluate performance of control systems and procedures, environmental impacts of operation, and to detect potential long-term effects.

(i) Upon receipt of the license application or any amendments thereto, and of any other documents required, the Department may transmit information for review and comment to federal, state, and local agencies having expertise in or jurisdiction over the proposed project or

activity. Written comments and reports of reviewing agencies may be considered by the Department in its decision-making review process on the license application or amendment.

(i) If an Environmental Impact Statement (EIS) or Environmental Assessment (EA) is required by a federal agency pursuant to the National Environmental Policy Act of 1969 (NEPA) and is provided by such federal agency, it may be used in the Department's decision-making review process.

(j) An application for a license shall contain proposed specifications relating to the management and disposition of licensed material or wastes resulting from activities that generate licensed material.

Section 10. Operational Requirements.

Each licensee shall:

(a) Operate in accordance with the requirements and objectives of this Chapter, including the procedures required by Section 9(f) and the monitoring required by Section 9(g).

(b) Submit a semi-annual report to the Department within sixty (60) days following January 1 and July 1 of each year. The report must specify the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous six months of operation, and such other information as the Department may require to estimate the maximum potential annual radiation doses to the public resulting from effluent releases. If quantities of radioactive materials released during the reporting period are significantly above the licensee's design objectives previously reviewed as part of the most recent licensing action, the report shall cover this specifically. On the basis of such reports or any additional information the Department may obtain from the licensee or others, the Department may require the licensee to take such actions as the Department deems appropriate to protect public health and safety and the environment.

(c) Licensee shall report events that have significant radiological effects on employee safety, public health, or the environment to the Department according to the following:

(i) All licensees shall notify the Department as soon as possible but no later than four (4) hours after the discovery of an event that prevents immediate protective actions necessary to avoid exposure to radiation or licensed materials that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).

(ii) Each licensee shall notify the Department within twenty-four (24) hours after the discovery of any of the following events involving licensed material:

(A) An unplanned contamination event that:

(I) Requires access to the contaminated area, by workers or the public, to be restricted for more than twenty-four (24) hours by imposing additional radiological controls or by prohibiting entry into the area;

(II) Involves a quantity of material greater than five times the lowest annual limit on intake specified in 10 C.F.R. Part 20, Appendix B; and

(III) Requires access to the area restricted for a radiological safety reason other than to allow isotopes with a half-life of less than twenty-four (24) hours to decay prior to decontamination.

(B) An event in which equipment is disabled or fails to function as designed when:

(I) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(II) The equipment is required to be available and operable when it is disabled or fails to function; and

(III) No redundant equipment is available and operable to perform required safety function.

(C) An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body;

(D) An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:

(I) The quantity of material involved is greater than five times the lowest annual limit on intake specified in 10 C.F.R. Part 20, Appendix B.

(II) The damage affects the integrity of the licensed material or its container.

(iii) Reports made by the licensees in response to the requirements of this Section must be made as follows:

(A) Licensees shall make reports required by Sections 10(c)(i) and 10(c)(ii) of this Chapter by telephone to the Department. To the extent that the information is available at the time of notification, the information provided in these reports must include:

(I) The caller's name and telephone number;

(II) A description of the event, including date and time;

(III) The exact location of the event;

(IV) The isotopes, quantities, and chemical and physical form of the licensed material involved; and

(V) Any personnel radiation exposure data available.

(B) Licenses who make a report required by Section 10(c)(i) and 10(c)(ii) of this Chapter shall submit a written follow-up report within 30 days of the initial report.

(C) Written reports prepared pursuant to other applicable rules may be submitted to fulfill this requirement if the reports contain all of the necessary information and the appropriate distribution is made. The reports must include the following:

(I) A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(II) The exact location of the event;

(III) A description of the isotopes, quantities, and chemical and physical form of the licensed material involved;

(IV) Date and time of the event;

(V) Corrective actions taken or planned and the result of any evaluations or assessments;

(VI) Timely schedule for remediation of the spill or release, if required; and

(VII) The extent of exposure of individuals to radiation or to radioactive materials without identification of the individuals by name.

Section 11. Expiration and Termination of Licenses.

(a) Expiration of the specific license does not relieve the licensee of the requirements of the Act, these rules, or existing license conditions.

(b) All license provisions continue in effect beyond the expiration date with respect to possession of licensed material until the Department notifies the former licensee in writing that the provisions of the license are no longer binding. During this time, the former licensee must:

(i) Limit actions involving radioactive material to strictly decommissioning related activities; and

(ii) Continue to control entry to restricted areas until the location(s) is suitable for release for unrestricted use.

(c) A licensee shall notify the Department, in writing to request the termination of the license within seven (7) days from when the licensee decides to terminate all licensed activities. This notification and request for termination of the license shall include the reports on decommissioning and reclamation activities as required by this Chapter.

(d) No less than thirty (30) days before the expiration date specified in the license, the licensee shall either:

(i) Submit an application for license renewal; or

(ii) Notify the Department, in writing, if the licensee decides not to renew the license.

(e) If a licensee does not submit a notification for a license renewal under Section 13 of this Chapter the licensee shall, on or before the expiration date specified in the license:

(i) Terminate use of licensed material;

(ii) Remove radioactive contamination to the extent practicable;

(iii) Properly dispose of the licensed material; and

(iv) Submit a completed Department Form SMP-314 or equivalent.

Section 12. Renewal of Licenses.

(a) A licensee shall notify the Department of their intent to renew their license at least thirty (30) days prior to the expiration of the existing license.

(i) Upon receipt of the notification to renew, the Department shall open the original license application, including, but not limited to, all applicable renewals and amendments, to:

(A) Ensure the application accurately reflects current operations;

(B) Incorporates changes to industrial standards codified in these rules;
and

(C) Incorporate operational data to accurately set design objectives.

(b) If an application for renewal has been filed at least thirty (30) days before the expiration date stated in the existing license, the existing license expires at the end of the day on which the Department makes a final determination to deny the renewal application or, if the determination states an expiration date, the expiration date stated in the determination.

Section 13. Amendments of Licenses at Request of Licensee.

(a) Application for amendment of a license shall be filed in accordance with Section 9 of this Chapter and shall specify the items which the licensee desires the license to be amended and the grounds for such amendment such items being beyond the scope of the licensee's ability to address under its performance based license.

(b) In considering an application by a licensee to renew or amend his license the Department will apply the applicable criteria set forth in Section 8(a) of this Chapter.

Section 14. Modification and Revocation of Licenses.

(a) The terms and conditions of all licenses shall be subject to amendment, revision, or modification at the request of the licensee.

(b) The Department may suspend or revoke a license for significant noncompliance to the Act, rules, regulations, or orders issued by the Department.

(c) The Department may suspend or revoke any license in whole or in part, for any false material statement in the application, any false statement of fact required under the provisions of the Act, or because of any report, record, or inspection or other means which would warrant the Department to refuse to grant a license on an original application.

(d) Except in the case of wanton and willful behavior or in situations where the public health, interest, or safety requires otherwise, no license shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefore, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

Section 15. Public Notice.

(a) Upon completion of the Department's review of an application, the Department shall provide notice to the public of issuance of an initial draft decision where the license application is approved, approved with conditions, or denied.

(i) The initial draft decision shall include, but is not limited to, the following:

(A) A decision analysis, that includes discussions on environmental impacts; and

(B) The final technical analysis conducted by the Department.

(ii) Upon issuance of the initial draft decision described in Section 15(a)(i), or a licensing action that significantly impacts the environment or public health and safety, the Department shall initiate a public comment process, and hold a public hearing upon written request from an "aggrieved party" as defined in W.S. § 35-11-103(a)(vii). If a public hearing is requested, the Department shall publish notice of the public hearing in a newspaper of statewide or general circulation or on the Department's website before the public hearing. The notice of the public hearing shall include:

(A) The time, place, and nature of the hearing;

(B) A copy of the initial draft decision; and

(C) A statement detailing where public comments may be submitted.

(iii) Pursuant to the request and notice described in Section 15(a)(ii), the Department shall hold a public hearing. Such hearing shall be transcribed and, at a minimum, require:

(A) The opportunity for cross-examination;

(B) A summary of the licensing activity proposed in the application;

and

(C) An opportunity for the public to comment and be heard.

(iv) The Rules of Practice and Procedure applicable to hearings before the Department shall apply. To the extent that any inconsistencies exist between the Rules of Practice and Procedure and these rules, these rules shall govern.

(b) For applications which are denied, the Department shall issue a written summary containing the basis for denial.

(c) The applicant or licensee shall pay for the expenses associated with public notice, public comment, or public meetings associated with the specific licensing request by the applicant or licensee.

(d) Following the public comment period and public hearing associated with a specific licensing request, the Department shall, after review of the public comments received by the Department, issue a written final decision. The final decision must ban all major construction before the completion of the written environmental analysis. The final decision is subject to review by the Environmental Quality Council and judicial review in accordance with Wyoming law.

Section 16. Decommissioning Requirements.

(a) The licensee shall notify the Department in writing within sixty (60) days of the licensee deciding to permanently cease principal activities at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with these regulations.

(b) The licensee shall notify the Department in writing within sixty (60) days if no principal activities under the license have been conducted for a period of twenty-four (24) months; or no principal activities have been conducted for a period of twenty-four (24) months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with these rules.

(c) From the date of written notification sent to the Department required in Sections 16(a) and (b), the licensee shall either:

(i) Begin decommissioning activities; or

(ii) Within twelve (12) months of written notification submit a

decommissioning plan, if required by section 17(a) of this Chapter and begin decommissioning upon the Department approval of that plan.

(d) The Department may grant a request to delay or postpone initiation of the decommissioning process if the Department determines that such relief is not detrimental to the public health and safety and is otherwise in the public interest.

(e) Coinciding with and in addition to the notification requirements of Sections 16(a) and (b) of this Chapter, the licensee shall maintain in effect all decommissioning financial assurances as required by Chapter 6 of these rules. The amount of financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to Section 17 of this Chapter.

(f) The Department may approve an alternate schedule for the submission of plans and for the completion of decommissioning as required pursuant to Sections 16(a) and (b) if the Department determines that the alternate schedule: (1) is necessary to effectively conduct decommissioning, (2) presents no undue risks to public health and safety, and (3) is otherwise in the public's interest. The request for an alternate schedule must be submitted no later than thirty (30) days before the required notification in Section 16(a) of this Chapter. The schedule for decommissioning may not commence until the Department has made a determination on the request for an alternate schedule.

(g) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the Department determines, where applicable, that:

(i) Licensed material has been properly disposed;

(ii) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

(A) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the applicable criteria for decommissioning found in 10 C.F.R. 20.1401 through 20.1406; or

(B) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the applicable criteria found in this chapter.

(iii) The Department has made a determination that all applicable standards and requirements have been met.

(h) A licensee may request that a subsite or a portion of a licensed area be released for unrestricted use before full license termination as long as release of the area of concern will not adversely impact the remaining unaffected areas and will not be recontaminated by ongoing authorized activities. When the licensee is confident that the area of concern will be acceptable to the Department for release for unrestricted use, a written request for release for unrestricted use and Department confirmation of closeout work performed shall be submitted to the Department. The request should include a comprehensive report, accompanied by survey and sample results

that show contamination is less than the limits specified in 10 C.F.R. 20.1401 through 20.1406 and an explanation of how ongoing authorized activities will not adversely affect the area proposed to be released. Upon confirmation by the Department that the area of concern is releasable for unrestricted use, the licensee may apply for a license amendment, if required.

Section 17. Decommissioning Plan.

(a) Each licensee authorized to receive, possess, and use licensed material shall submit a plan for completion of decommissioning. The decommissioning plan will be approved by the Department if the plan demonstrates that decommissioning will be completed as soon as practical while adequately protecting the health and safety of workers and the public, if the procedures necessary to carry out decommissioning:

(i) Have not been previously approved by the Department; and

(ii) Could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(A) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(B) Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(C) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(D) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(b) Procedures listed in paragraph (a) of this section with potential health and safety impacts may not be carried out prior to approval of the decommissioning plan.

(c) The proposed decommissioning plan, if required by this Chapter or by license condition must include:

(i) Description of the condition of the site, separate buildings, or outdoor areas sufficient to evaluate the acceptability of the plan;

(ii) Description of planned decommissioning activities;

(iii) Description of methods used to assure protection of workers and the environment against radiation hazards during decommissioning;

(iv) A description of the planned final radiation survey; and

(v) An updated detailed cost estimate for decommissioning, comparison of

that estimate with present funds set aside for decommissioning, and plan for assuring the availability of adequate funds for completion of decommissioning.

(A) For decommissioning plans calling for completion of decommissioning later than twenty-four (24) months after plan approval, the licensee must provide a justification for any delay based on the criteria in subsection (f) of this Section.

(d) Except as provided in subsection (f) of this Section, the licensee shall complete decommissioning of the site, separate buildings, and outdoor area as soon as practicable but no later than twenty-four (24) months following the initiation of decommissioning.

(e) Except as provided in subsection (f) of this Section, when decommissioning involves the licensed area, the licensee shall request license termination as soon as practicable but no later than twenty-four (24) months following the initiation of decommissioning.

(f) The Department may approve a request for an alternate schedule for completion of decommissioning of the site or separate building or outdoor area(s), and license termination if appropriate and if the Department determines that the alternative schedule is warranted. In doing so, the Department shall consider the following:

(i) Whether it is technically feasible to complete decommissioning within the allotted twenty-four (24) month period;

(ii) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted twenty-four (24) month period;

(A) Including whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay.

(iii) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(iv) Other site specific factors which the Department may consider appropriate on a case-by-case basis, such as the regulatory requirement of other government agencies, lawsuits, groundwater treatment activities, monitored natural groundwater restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(g) After submittal and upon approval of the decommissioning plan by the Department, the licensee shall decommission in accordance with the approved plan. As a final step in the decommissioning the licensee shall:

(i) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed Department Form SMP-314 or equivalent;

(ii) Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with

the criteria for decommissioning in this Chapter. The licensee shall:

(A) Report levels of gamma radiation in units of microroentgen (millisieverts) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of microcuries (disintegrations per minute or megabecquerels) per 100 square centimeters removable and fixed for surfaces, microcuries (megabecquerels) per milliliter for water and picocuries (becquerels) per gram for solids such as soils or concrete; and

(B) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

Chapter 5

Notices, Instructions, and Reports to Workers

Section 1. Purpose.

This Chapter establishes requirements for notices, instructions, and reports by licensees to individuals engaged in work under a license and options available to such individuals in connection with the Department's inspections of licensees to ascertain compliance with the provisions of the Wyoming Environmental Quality Act, Wyoming Statute §§ 35-11-2001 *et seq.*, and regulations, orders, and licenses issued thereunder regarding radiological working conditions as specified within the provision of the Atomic Energy Act of 1954, as amended.

Section 2. Scope.

This Chapter applies to all persons who receive, possess, use, own, or transfer source material recovered from any mineral resources processed primarily for purposes other than obtaining the source material content.

Section 3. Incorporation by Reference (IBR) of 10 Code of Federal Regulations (C.F.R.) Part 19; Notice, Instructions and Reports to Workers: Inspection and Investigations.

(a) The Department fully adopts and hereby incorporates by reference 10 C.F.R. Part 19, revised as of January 1, 2025, including all sections and any notes and appendices therein, unless expressly provided otherwise in these rules. These rules do not include any later amendments or editions of the incorporated matter.

(b) The following 10 C.F.R. sections as listed on January 1, 2025 are excluded from these rules: 19.1, 19.2, 19.3, 19.5, 19.11(b) and (e), 19.8, 19.14(a), 19.18, 19.30, and 19.40.

(c) Any references in 10 C.F.R. Part 19 adopted by reference to the United States Nuclear Regulatory Commission (NRC) or any component thereof shall be deemed to be a reference to the Department.

(d) Any reference in the federal rules adopted by reference to the Commission's "Form 3" shall be deemed a reference to the Department's "Source Material Program Form 3". Each licensee shall prominently post the Department's Source Material Program Form 3.

(e) In 10 C.F.R. Part 19, any references to 10 C.F.R. Parts 50, 52, 54, 60, 63, 72, and 76 are not incorporated by reference.

(f) In 10 C.F.R. Section 19.32, any references to the Atomic Energy Act of 1954, as amended, or under any title of the Energy Reorganization Act of 1974, as amended, are not references to the Wyoming Statute.

Chapter 6

Financial Assurance Requirements

Section 1. Purpose.

(a) This Chapter provides for financial assurance arrangements in support of decontamination, decommissioning, reclamation, restoration, disposal, and any other activity required by the Department, for costs associated with the licensed facilities and sites.

Section 2. Scope.

(a) This Chapter sets forth the requirements of Wyoming Statute (W.S.) §§ 35-11-417 through 418 for the establishment of financial assurance arrangements for licensees listed in these rules. Such financial assurance arrangements may consist of surety bonds, federally insured certificates of deposit payable to the Department, cash deposits, certificates of deposits, deposits of government securities, irrevocable letters of credit issued by a bank organized to do business in the United States, or any combination of approved mechanisms.

(b) Licensees shall comply with the requirements of 10 Code of Federal Regulations (C.F.R.) Sections 20.1401-1405.

(c) References to 10 C.F.R. 20.1401 regarding Parts 50, 52, 54, 60, 63, and 72 are not incorporated by reference.

Section 3. Terms Unique to Financial Assurance.

(a) "Annual Review" is conducted during the review of the annual report which is due on the anniversary date of the establishment of the permit to mine or source material license in circumstances where no permit exists.

(b) "Cost Estimate" means a document containing the total costs that would be incurred if an independent contractor were hired to perform the decommissioning of the facility and disposal of licensed material, and all associated costs to the Department in conducting decommissioning oversight. Costs must reflect current approved estimated costs.

(c) "Facility" means the location within one building, vehicle, or under one roof and under the same administrative control: (1) at which the possession, use, processing, or storage of licensed material is or was authorized; or (2) may also mean multiple such locations at a site or part of a site.

Section 4. Financial Assurance.

(a) The Department requires specific source material licensees to furnish a decommissioning financial assurance arrangement in a dollar amount approved by the Department, as necessary to protect public health and safety, to ensure corrective action during operation, to ensure decontamination and decommissioning of a facility or site, and for disposal

of licensed material in the event of abandonment, insolvency, or other inability of the licensee to meet the requirements of the license, the Act, or these rules.

(b) The costs associated with reclamation in accordance with this Chapter shall be sufficient to ensure compliance with those standards established by the Department pertaining to bonds, sureties, and other financial arrangements to ensure adequate reclamation and long term management of such material and its disposal.

(c) Licensees shall provide the Department with cost-estimates that are reasonably accurate and these estimates shall include costs for the following:

(i) Disposal of licensed material;

(ii) Decontamination and decommissioning of buildings, facilities, and the site to a standard which achieves levels that allow release for unrestricted use of these areas upon decommissioning;

(iii) Reclamation of licensed areas to meet the requirements of 10 C.F.R. Sections 20.1401-1405;

(iv) Costs that would be incurred if an independent contractor was hired to dispose of radioactive materials and perform decontamination, decommissioning, and reclamation work including:

(A) The cost of removal and/or disposal of licensed material which is generated, stored, processed, or otherwise present at the facility or site; and

(B) The probable extent of contamination through the possession or use of licensed material, at or adjacent to the facility or site, and the probable cost of removal of such contamination;

(v) An adequate contingency factor.

(d) Prior to approval of an application for a new license, an applicant shall establish financial assurance arrangements to ensure the decontamination and decommissioning of the facility.

(e) Applicants shall provide an executed original copy of each financial assurance instrument required by this Chapter for approval by the Department as appropriate.

(i) An applicant for a new license shall submit a certification that financial assurance for decommissioning has been provided in the amount required by this Chapter. An executed original copy of each financial assurance instrument required by this Chapter and approved by the Department shall be submitted to the Department sixty (60) days prior to the approval of the Permit to Mine and Source Material License.

Section 5. Acceptable Financial Assurance Methods.

(a) Refer to W.S. §§ 35-11-417 through 418 for acceptable financial instruments and assurances.

(b) Self-insurance, or any arrangement that essentially constitutes self-insurance (for example, a contract with a state or federal agency), including bonding pursuant to W.S. § 35-11-417(d) will not satisfy the financial assurance requirements of these rules.

(c) The term of the financial assurance warranty shall automatically renew until termination of the license by the Department, unless it can be demonstrated that another arrangement would provide an acceptable level of assurance. The requirements for cancelation or substitution of the financial assurance warranty are outlined in W.S. §§ 35-11-420 and 35-11-421.

(d) The value of the financial assurance warranty shall not be dependent upon the success, profitability, or continued operation of the licensed operation.

Section 6. Periodic Review of Financial Assurances.

(a) As part of the annual report, a licensee shall provide to the Department written proof of the value of existing financial warranties and any licensee-proposed changes to the financial assurance warranties, including updated decommissioning plans, changes in cost estimates, or the changes to the type of warranty. The report shall describe any changes in operations, estimated costs, or any other circumstances that may affect the amount of required financial assurance warranties, including any increased cost attributable to inflation.

(b) Each financial assurance shall be subject to annual review, at a minimum, and approval by the Department to assure its continued adequacy of each warranty.

(c) With the approval of the Department, changes to the amount of a decommissioning financial assurance instrument may occur to account for increases or decreases in cost estimates resulting from inflation or deflation, changes in engineering plans, activities performed, or changes in any other condition affecting disposal, decontamination, and decommissioning costs.

(i) With the approval of the Department, reduction in the amount of decommissioning financial assurance may occur as decommissioning activities are completed, in accordance with an approved decommissioning plan or to reflect current site conditions and license authorization.

(d) Appropriate and adequate decommissioning financial assurances shall be maintained in effect and in good standing by the licensee until termination of the license or as otherwise authorized by the Department, regardless of whether decommissioning is phased through the life of licensed operations or occurs at the end.

(e) The Department fully adopts and hereby incorporates by reference the following: 10 C.F.R. 40.36 (d)(1)(ii) and (iii), and 40.36(d)(2)(i)-(viii).

Section 7. Financial Assurance Recordkeeping.

(a) Licensees shall keep records of financial assurances throughout the life of the license, including, but not limited to, records of the cost estimate performed for the decommissioning, the amount certified for decommissioning, and records of the funding method used for assuring funds.

(b) The Department fully adopts and hereby incorporates by reference the following: 10 C.F.R. 40.36(f)(1)-(3).

Chapter 7

Fees

Section 1. Purpose.

(a) As authorized by the Act to support all direct and indirect costs associated with the operation of the Program, this Chapter establishes fees for radiation control services rendered by the Department and provisions regarding payment.

Section 2. Scope.

(a) These rules apply to a person who is:

(i) An applicant for or holder of a specific source material license issued by the Department pursuant to Chapter 4 of these rules or by the NRC or another Agreement State; and

(ii) Required to have routine and non-routine safety inspections of licensed activities.

Section 3. Costs Generally.

(a) "Direct Costs" are operating costs directly assignable to the Program. Direct Costs include salaries, supplies, travel, and other costs incurred by the Program such as, but not limited to, costs associated with processing license applications, inspecting sites, and developing program rules.

(b) "Indirect Costs" are costs not directly assignable to the Program. Indirect Costs include the cost of activities such as human resource management, procurement, and accounting. Indirect Costs include the partial costs of state agencies such as Administration and Information, the Treasurer's Office, and other state agencies providing support or resources to the Program. These are costs which indirectly support the ability of the Program to function, but are not directly related to producing or inspecting a license or the immediate management of those functions. Uncollected fees from licensees will be charged as Indirect Costs for the following year. Indirect Costs will be collected by the Department as described in Section 4, below.

(c) Direct Costs fall into two different categories:

(i) "Site Specific Direct Costs" are incurred by the Department in the form of time and resources for a specific applicant or licensee. Site Specific Direct Costs shall include, but are not limited to, the costs of reviewing applications, amendments, inspections, or incident responses.

(ii) "Non-Site Specific Direct Costs" are not attributable to a specific licensee, but represent a cost to the Department attributable to the Program. These types of costs shall include, but are not limited to, materials such as paper and other office supplies, training of staff, development of guidance documents, and other general administrative costs.

(d) The accumulation of costs can be described as follows:

(i) "Total Direct Costs" are the combination of the Site Specific Direct Costs and Non-Site Specific Direct Costs.

(ii) "Total Costs" are the sum of Site Specific Direct Costs, Non-Site Specific Direct Costs, and Indirect Costs.

(e) "Fiscal Year" is the twelve (12) month period from July 1 through June 30, as used by the State of Wyoming for budget formulation and execution.

(f) "Projected Costs" are the most recent two (2) year average of Total Costs assumed by the licensee, adjusted to the current year's program budget.

Section 4. Tracking Costs.

(a) The Department shall keep a record of Site Specific Direct Costs associated with each license.

(b) Non-Site Specific Direct Costs shall be distributed to all licensees based on the proportion of an individual licensee's Site Specific Direct Costs, as compared to the combined Total Costs of all licensees. For example, if company X demands roughly fifty percent (50%) of the total billable Site-Specific Direct Costs for the Program they will be charged fifty percent (50%) of the Non-Site Specific Direct Costs.

(c) Indirect Costs will be calculated and allocated to licensees and the Program using the rates and basis for application detailed in the Cognizant Agency Negotiation Agreement, negotiated between the Department and the federal government. Indirect Costs are applied to both Site Specific and Non-Site Specific Direct Costs.

Section 5. Application Fees.

(a) All new license applications shall be accompanied by an initial one hundred thousand dollar (\$100,000.00) application fee. The application fee shall only cover the costs associated with processing the license application.

(b) The application fee shall be carried forward until the Department issues a license to the applicant. If the application fee is expended before the license is issued, an additional one hundred thousand dollar (\$100,000.00) application fee shall be assessed and collected from the applicant. This shall continue in increments of one hundred thousand dollars (\$100,000.00) until the Department issues a license to the applicant.

(c) Once the Department issues a license, the new licensee will be refunded or credited the amount of any unused portions of the application fee.

(d) Applicants that withdraw an application will not be refunded the unused application fee and forfeit any remaining initial application fees paid to the Department. However, applicants that withdraw an application after paying the additional application fees, as

described in subparagraph (b) above, shall be refunded the unexpended balance of the additional application fees.

Section 6. Annual Fees.

(a) Annual fees are to be paid in full prior to the fiscal year for which the fees are assessed. The Department shall notify all licensees of the amount of their annual fee ninety (90) days prior to the start of the fiscal year. The annual fee must be received and processed prior to the Department taking any licensing or other requested action.

(b) Until the Department can establish Projected Costs for a licensee, the licensee shall be billed a predetermined annual fee. The predetermined annual fee shall be equal to the annual estimated cost of the Program divided by the total number of licensees.

(c) Once the Department establishes Projected Costs for a licensee, the licensee shall be assessed an annual fee based on the licensee's average Total Costs from the previous two years of operation.

(d) A new licensee shall be billed an annual fee equal to the average Total Costs of all licensees, until Projected Costs can be established.

(e) Following recognition of all costs for a fiscal year, the Department shall prepare a statement for each licensee showing the itemized actual Total Costs for the fiscal year.

(i) If the annual fee collected from the licensee exceeds the Total Costs attributable to the licensee, the statement shall be accompanied by a credit or refund of the difference in amounts to the licensee.

(ii) If the annual fee collected from the licensee is less than the Total Costs attributable to the licensee, the statement shall be accompanied by an invoice covering the difference in amounts owed to the Department. The licensee shall have sixty (60) days from the date of the invoice to pay the Department the full outstanding balance of the invoice.

(f) New licenses issued after the beginning of the fiscal year will be assessed an annual fee, as described above, but the fee will be prorated based on the date the license was issued.

(g) Failure to pay prescribed fees may result in, and is not limited to, the Department halting the processing of an amendment, suspending or revoking a license, or issuing a notice of violation and order as the Department deems necessary and appropriate to carry out the provisions of the Act.

(h) The minimum annual fee for all licensees is one thousand dollars (\$1,000.00).

Section 7. Method of Payment.

Payments made under this Chapter shall be paid in U.S. dollars through electronic funds transfer, check, or money order made payable to the Wyoming Department of Environmental Quality.

Chapter 8

Risk Informed, Performance Based Licensing and Inspection

Section 1. Purpose.

(a) This Chapter establishes a risk informed, performance based regulatory framework as it will be applied to licensees regulated by the Program. No undue risk to public health, safety, or the environment shall occur as a result of licensed operations by the licensee under this regulatory framework.

Section 2. Scope.

(a) Except as otherwise specifically provided, this Chapter applies to all persons who acquire, own, possess, use, transfer, offer and receive for transport, use, or dispose of any licensed material pursuant to these rules. Nothing in this Chapter shall apply to any person subject to regulation not relinquished by the NRC.

Section 3. Regulatory Approach.

(a) The Department shall determine licensing inspection actions, enforcement, and other decisions by the Program based on the risk informed, performance based regulatory approach which is a combination of the following approaches:

(i) “A risk informed approach” to regulatory decision-making represents a philosophy whereby risk insights are considered together with other factors to establish requirements that better focus licensee and regulatory attention on design and operational issues, pertaining to licensed material safety, commensurate with their importance to employee health and safety, public health and safety, and environmental protection.

(ii) “A performance based approach” to regulatory decision making represents a philosophy whereby performance standards are established that must be achieved by the licensee, but provides flexibility to the licensee as to the means of meeting those standards. This approach emphasizes results over process and methods and uses those results as the primary basis for regulatory decision-making. This approach incorporates the following attributes:

(A) Measurable (or calculable) parameters (i.e., direct measurements of the physical parameter of interest or of related parameters that can be used to calculate the parameter of interest) that exist to monitor a system, including facility and licensee performance;

(B) Objective criteria to assess performance are established based on risk insights, deterministic analysis, and performance history;

(C) Flexibility for licensees to determine how to meet the established performance criteria in ways that will encourage and reward improved outcomes; and

(D) Failure to meet a performance criterion, while undesirable, will not in

and of itself constitute or result in an immediate safety concern.

(b) As part of the risk informed performance based regulatory approach, the Department shall utilize risk insight, engineering analysis and judgment, including the principle of defense-in-depth and incorporation of safety margins, and performance history to:

(i) Focus attention on the areas of greatest potential significance to human health, safety, and the environment;

(ii) Establish objective criteria for evaluating performance;

(iii) Develop measurable or calculable parameters for monitoring system and license performance;

(iv) Provide flexibility to licensees to determine how to meet the established performance criteria in a way that will encourage and reward outcomes; and

(v) Focus on the results as the primary basis for regulatory decisions.

Section 4. Changes, Tests, or Experiments.

(a) Subject to the conditions in Section 4(b) of this Chapter and without obtaining a license amendment pursuant to Chapter 4 of these rules, a licensee may:

(i) Make changes to the components of the licensed facility, which have a nexus to licensed material described in the most updated license application;

(ii) Make changes in the procedures as described in the most updated license application involving licensed material; and

(iii) Conduct tests or experiments not described in the most updated license application involving licensed material.

(b) The licensee shall obtain a license amendment pursuant to Chapter 4 of these rules prior to implementing a proposed change, test, or experiment if the change, test, or experiment would result in or create the following:

(i) More than a minimal increase in the frequency of occurrence of an accident involving licensed materials, previously evaluated in the most updated license application;

(ii) More than a minimal increase in the likelihood of occurrence of a malfunction of facility structure equipment, or monitoring system (SEMS) important to licensed material safety previously evaluated in the most updated license application;

(iii) More than a minimal increase in the consequence of an accident involving licensed material previously evaluated in the most updated license application;

(iv) More than a minimal increase in the consequences of a malfunction of a SEMS important to licensed material safety previously evaluated in the most updated license

application;

(v) A possibility for a credible and potentially significant accident scenario of a different type, involving licensed material, than any previously evaluated in the most updated license application;

(vi) A possibility for a malfunction of a SEMS important to licensed material safety with a different result than previously evaluated in the most updated license application; and

(vii) A departure from the method of evaluation of radiological safety described in the most updated license application used by the Department. For NRC licenses transferred and recognized by the Department, a departure from the method of evaluation of radiological safety discussed in the NRC's final safety evaluation report (SER), any federal environmental impact statement (EIS) or environmental assessment (EA), technical evaluation reports (TER), or other analyses and evaluation for license amendments.

(c) For purposes of this Chapter, and as applied to NRC licenses recognized by the Department, SEMS means any SEMS which have been referenced in an NRC SER, TER, EA, or EIS, including supplements and amendments thereof.

(d) Licensees must obtain a license amendment unless the change, test, or experiment is consistent with the Department's and NRC's previous conclusions pertaining to radiological safety, or the basis of, or analysis leading to, the conclusion of actions, designs, or design configuration analyzed and selected in the site or facility's SER, TER, and EIS, or EA performed by the NRC. This would include all supplements and amendments, and TERs, EAs, and EISs issued with amendments to a license. NRC's previous conclusions would include, but would not be limited to Regulatory Issues Summaries (RIS), executive orders, or information notices.

Section 5. Safety and Environmental Review Panel.

(a) Each licensee shall develop a Safety and Environmental Review Panel (SERP). The SERP's purpose is to evaluate changes to the license application, procedures, or physical processes to the criteria in Section 4 of this Chapter and determine if the action can be completed without a license amendment.

(b) The SERP shall consist of, at a minimum, the following three members that are employees of the licensee:

(i) One member having expertise in management (e.g., Plant Manager). This member shall be responsible for financial approval for changes;

(ii) One member having expertise in operations or construction. This member shall have responsibility for implementing any operational changes; and

(iii) One member that is the licensee's radiation safety officer (RSO) or equivalent. This member shall maintain the responsibility of assuring changes conform to radiation safety and environmental requirements. The Department may approve a qualified contractor to fulfill this role where circumstances prevent the licensee from utilizing a qualified employee.

Department approval must be obtained in writing.

(c) Additional members of the SERP may include, as appropriate, individuals to address and assist with technical aspects such as ground or surface water hydrology, specific earth sciences, or other technical disciplines. Temporary or permanent members, other than the three above-specified individuals, may be consultants or contractors.

(d) The licensee shall maintain records of any changes made pursuant to this Chapter until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with Section 4 of this Chapter. The licensee shall furnish, in an annual report to the Department, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each made pursuant to this Chapter. In addition, the licensee shall annually submit to the Department any changed pages, which shall include both a change indicator for the area changed (i.e., a bold line vertically drawn in the margin adjacent to the portion actually changed), and a page change identification (date of change or change number), to the Operations Plan and Reclamation Plan of the most updated approved license application to reflect changes made under this condition.

(e) All SERP evaluations shall be made available to the Department during site inspections. The Department may review all the SERP evaluations to ensure that it concurs with the conclusions. In events where the Department disagrees with the conclusions of a SERP, an amendment application will be required. The Department may take enforcement action or issue penalties as necessary relative to the SERP evaluations.

Section 6. Contents of a SERP Evaluation.

(a) The evaluation through the SERP process must answer the items presented in Sections 4(b) and 4(c) of this Chapter. For each item the evaluation shall present their justification and this document shall be reviewed by the Department at the time of inspection for concurrence. Certain items within Section 4 of this Chapter may require a risk assessment to be performed to determine the significance of an event. Those risk assessments will be reviewed by the Department at the time of the inspection.

Section 7. Exclusions to the SERP Process.

(a) The following items shall not be approved through the SERP process and shall be sent to the Department as a license amendment for approval:

- (i) Amending license conditions; and
- (ii) Changes to license boundary.

Chapter 9

Transportation of Radioactive Material

Section 1. Purpose.

(a) This Chapter establishes requirements for packaging, preparation for shipment, and transportation of licensed material.

(b) The packaging and transport of licensed material are also subject to the Wyoming Environmental Quality Act, Wyoming Statute § 35-11-2001 et seq. the Program's rules and regulations, and the regulations of other federal agencies (such as the U.S. Department of Transportation, the U.S. Postal Service, and the Commission) having jurisdiction over means of transport. The requirements of this Chapter are in addition to, and not in substitution for, other applicable requirements.

Section 2. Scope.

(a) This Chapter applies to any licensee authorized by specific or general license issued by the Department to acquire, own, possess, use, transfer, offer or receive for transport, or dispose of licensed material, if the licensee delivers that material to a carrier for transport, transports the material outside the site of usage as specified in the license, or transports that material on public highways. No provision of this Chapter allows for the unauthorized possession of licensed material.

Section 3. Incorporation by Reference (IBR) of 10 Code of Federal Regulations (C.F.R.) Part 71; Packaging and Transportation of Radioactive Material.

(a) The Department fully adopts and hereby incorporates by reference 10 C.F.R. Part 71, §§ 71.0 through 71.137, revised as of January 1, 2025, including all sections and any notes and appendices therein, unless expressly provided otherwise in these rules. The U.S. Department of Transportation's regulations, as cited in 10 C.F.R. § 71.5 (January 1, 2025), are also fully adopted and hereby incorporated by reference. These rules do not include any later amendments or editions of the incorporated matter.

(b) The following 10 C.F.R. sections, including all subparts, as of January 1, 2025 are excluded from these rules and are not incorporated by reference: 71.0, 71.1, 71.2, 71.6, 71.7, 71.9, 71.11, 71.12, 71.13, 71.14(b), 71.15, 71.16, 71.18, 71.19, 71.22, 71.23, 71.24, 71.25, 71.31, 71.33, 71.35, 71.37, 71.38, 71.39, 71.41, 71.43, 71.45, 71.51, 71.53, 71.55, 71.57, 71.59, 71.61, 71.63, 71.64, 71.65, 71.70, 71.71, 71.73, 71.74, 71.75, 71.77, 71.81, 71.83, 71.85(a)-(c), 71.87(g), 71.88, 71.91(a)(5), 71.91(a)(7), 71.91(b), 71.95, 71.97, 71.99, 71.100, 71.101(c)(2), 71.101(d), 71.101(e), 71.101(g), 71.107, 71.109, 71.111, 71.113, 71.115, 71.117, 71.119, 71.121, 71.123, and 71.125.

(c) The terms "Close reflection by water," "Critical Safety Index," "Containment System," "Deuterium," "Fissile material," "Graphite," "Maximum normal operating pressure," "Optimum interspersed hydrogenous moderation," "Special Form," "Spent nuclear fuel" or

"Spent fuel," "State," "Depleted uranium," and "Enriched uranium" as defined in 10 CFR § 71.4 as of January 1, 2025 are excluded from these rules and are not incorporated by reference.

(d) Any references in the federal rules adopted by reference to the United States Nuclear Regulatory Commission (NRC), or any component thereof, shall be deemed to be a reference to the Department and the Source Material Program, with the following exceptions:

(i) When used in 10 C.F.R. §§ 71.5(b) and 71.10, 71.17(c)(3), 71.17(e), 71.85(c), and 71.93(c); and

(ii) The definitions of "certificate holder" and "certificate of compliance (CoC)" in 10 C.F.R. 71.12.

(e) If, for any reason, the U.S. Department of Transportation's regulations are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of 49 CFR Parts 171 through 180 appropriate to the mode of transport to the same extent as if the shipment was subject to these regulations.

(f) A request for modification, waiver, or exemption from the requirements in 49 C.F.R. Parts 171 through 180, and any notification referred to in those requirements, must be filed with, or made to, the Department.