



Matthew H. Mead, Governor

Department of Environmental Quality

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Todd Parfitt, Director

Mr. Stephen Poy
Radioactive Materials Safety Branch
Division of Material Safety and State Agreements
Office of Federal and State Materials and Environmental Management Programs
July 8, 2016

Dear Mr. Poy:

The State of Wyoming and its Department of Environmental Quality (WYDEQ) greatly appreciates the opportunity to engage in discussion with you and NRC Staff regarding the State's plan to pursue an agreement under Section 274 of the Atomic Energy Act of 1954 as amended (AEA), whereby NRC will discontinue its AEA authority over source material from recovery or milling and the resulting 11e(2). byproduct material. In preparation for such agreement the State is supplying the NRC with draft regulation such that NRC can review and provide comments on adequacy and compatibility. These comments are greatly appreciated and will be incorporated into the draft and ultimately the final agreement packet that is sent to the NRC. Included are Chapter 4 Licensing Requirements for Source and Byproduct Material, Chapter 10 General Licenses, Chapter 6 Financial Assurance, and Chapter 1 General Provisions since it contains definitions that apply to each Chapter. Along with Chapters 4, 10, and 6 the State included Compatibility Tables equivalent to 10 CFR Part 40 to show where the State differs from the NRC. If you have any questions or concerns please feel free to contact Ryan Schierman the Uranium Recovery Program Manager at (ryan.schierman@wyo.gov) 307-777-7757 Thanks again for the cooperation in this process.

Sincerely

Kyle Wendtland
Administrator
Wyoming Land Quality Division

Cc: Ryan Schierman
Eva La
Brandi O'Brien

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION
URANIUM RECOVERY PROGRAM
CHAPTER 4
LICENSING REQUIREMENTS FOR SOURCE AND BYPRODUCT 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, transfer, offer or receive for transport, or deliver any source material from recovery or milling and the created byproduct material. This Chapter also governs the operation of facilities for, and the disposition of byproduct material resulting from uranium or thorium processing, and provides requirements for decommissioning and the long term care and custody of byproduct material. Unless otherwise specified, the requirements of this Chapter are in addition to, and not in substitution for, other applicable requirements of the Uranium Recovery Program Rules.

Section 2. Scope.

(a) This Chapter establishes performance objectives and procedural requirements applicable to any source material recovery or milling operation and to waste systems for byproduct material including specific technical and financial requirements for siting, construction, operating, monitoring, decontamination, reclamation, and ultimate stabilization, as well as requirements for licensee transfer and termination, long-term site monitoring, surveillance, ownership, and ultimate custody of source material milling facilities and byproduct material impoundments.

(b) This Chapter governs byproduct material located at a site where milling operations are no longer active, if such site is not covered by the remedial action program of Title I of the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 (42 U.S.C 7901 *et seq.*). This Chapter does not establish criteria and procedures for the issuance of licenses for materials covered under Title I of UMTRCA of 1978, unless that program fails to accomplish the remedial action. Disposal at a uranium or thorium processing site of licensed material which is not byproduct material must not inhibit reclamation of the tailings impoundment or the ability of the United States Government to take title to the impoundment as long-term custodian.

(c) A person subject to the regulation of this Chapter may not receive title to, acquire, own, possess, transfer, offer or receive for transport, provide for long term care, or deliver or dispose of byproduct material, or any source material after removal from its place of deposit in nature, unless authorized in a specific license issued by the Department pursuant to this Chapter.

Section 3. Incorporation by Reference.

(a) Any reference in these rules to requirements, or procedures contained in the Code of Federal Regulation (CFR), Title 10, Part 40, Sections 40.51, 40.54, 40.55, 40.61, and Appendix A shall constitute the full adoption by reference of that part and subparts as they

appear in 10 CFR 40, Appendix A, revised as of January 1, 2016, unless expressly provided otherwise in these rules. These rules do not include any later amendments or editions of incorporated matter.

(b) The following 10 CFR portions, including all subparts, as of January 1, 2016 are excluded from these rules and are not included by reference 40.51(b)(6) and Part 40, Appendix A: "definitions," Criterion 11 of Section III. Site and Byproduct Material Ownership, and Criterion 12 of Section IV. Long-Term Site Surveillance.

(c) Any reference in these rules to requirements, or procedures contained in the Code of Federal Regulation (CFR), Title 10, Part 150.31 shall constitute the full adoption by reference of that part and subparts as they appear in 10 CFR Part 150.31, revised as of January 1, 2016, unless expressly provided otherwise in these rules. These rules do not include any later amendments or editions of incorporated matter.

(d) The following 10 CFR Part 150.31(b)(iv) as of January 1, 2016 is excluded from these rules.

(e) The NRC shall retain the rights reserved to the NRC in 10 CFR Part 150.15 and 150.15(a).

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 applicants 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 NRC or Department 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.

(c) Deliberate misconduct means an intentional act or omission that the person knows:

(i) Would cause 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; or

(ii) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

Section 5. Filing an Application for a Specific License.

(a) Two copies of the applications for a specific license shall be mailed, or sent electronically as approved by the Administrator, to the Department accompanied with the license application fee, pursuant to Chapter 13 of these rules to:

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

(b) The application for a specific license, and copies thereof, may be submitted in conjunction with an application for a mining permit as described in W.S. §§ 35-11-406 and -428 (2015). 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 something comparable, such that the information is easily accessible and pages are not misplaced.

(c) A permit to mine, when applicable, shall be obtained prior to the license being issued. Failure to obtain a permit to mine shall be grounds for refusing to issue a license. As determined by the Department, activities such as toll milling shall not require a permit to mine.

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

(e) 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) of the mixture, compound, solution, or alloy.

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

(d) 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, the common defense and security, and is otherwise in the public interest.

(e) Common and contract carriers, freight forwarders, warehouseman, and the United States Postal Service are exempt from the regulations in this Chapter and the requirements set forth in Section 81 of the Atomic Energy Act of 1954, 42 U.S.C. §§ 2011 *et seq.*, as amended to the extent that they transport or store byproduct material in the regular course of carriage for another or storage incident thereto.

(f) 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 81 and 82 of the Act (42 U.S.C. § 2111 and 42 U.S.C. § 2112) and from the regulations in this part 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 byproduct 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.

(g) 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, transfer, offer or receive for transport and use source material from recovery or milling 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, including Chapter 3 of the Non-Coal Rules and Regulations.

Section 8. General Requirements for Issuance of Specific Licenses for Source Material Recovery or Milling

(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

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

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

(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 NRC or 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, determined by the Department, find that 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.

(f) Each person licensed by the Department 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 for Source Material Recovery or Milling.

(a) A specific license for source material from recovery or milling 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 source material from milling or byproduct material shall contain all information required under these regulations 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-range 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) Byproduct material disposal, 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 and for reclamation of the byproduct material disposal areas in accordance with technical requirements of 10 CFR Part 40, Appendix A ;
- (xiv) Proposal of an acceptable form and amount of financial assurance in accordance with 10 CFR Part 40, Criterion 9 of Appendix A; and the Department rules;
- (xv) Specifications for the emissions control and disposition of byproduct material; and
- (xvi) Emergency response protocol.
- (xvii) 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 are recovered, stored, processed, or disposed. The application for a new license must demonstrate that the owner or owners of the property were sent by certified and regular United States mail, notification from the applicant stating that:
 - (A) Licensed radioactive material will be recovered, stored, processed, or disposed on the property; and
 - (B) Decommissioning by the Department, 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.
- (c) 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.

(d) 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.

(e) Applicants or licensees may request such exemption from the Department. The request for exemption shall provide the Department with the necessary information, as determined by the Department, to demonstrate that no significant environmental impact will result from the proposed or licensed activity.

(f) The applicant shall provide written specification describing the means employed to meet the following requirements during the operational phase of any project:

(i) Recovery or milling operations shall be conducted so that all airborne effluent releases are reduced to levels as low as is reasonably achievable (ALARA).

(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 conventional milling site and 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 of 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 to receive title to, acquire, own, possess, transfer, offer or receive for transport, and use source material from recovery or milling and the created byproduct material shall contain proposed specifications relating to the recovery or milling operations and the disposition of tailings or wastes resulting from such recovery or milling activities to achieve the requirements and objectives set forth in the criteria listed in 10 CFR Part

40, Appendix A. Each applicant for a new license or for license renewal must clearly demonstrate how the requirements and objectives set forth in 10 CFR Part 40, Appendix A have been addressed. Failure to clearly demonstrate how the requirements and objectives in 10 CFR Part 40, Appendix A have been addressed shall be grounds for refusing to approve an application.

Section 10. **Operational Requirements.**

Each licensee authorized to receive title to, acquire, possess, transfer, offer or receive for transport, and use source material from recovery or milling or the created byproduct material shall:

(a) Operate in accordance with the requirements and objectives of 10 CFR Part 40, Appendix A, and this Chapter, including the procedures required by Section 9(f) and the monitoring required by Section 9(g).

(b) Submit a bi-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.). The following events require immediate notification to the Department:

(A) Any failure in a tailings or waste retention system which results in a release of tailings or waste into unrestricted areas; and

(B) Any unusual conditions which are not contemplated in the design of the retention system and which if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

(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 CFR 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 CFR Part 20, Appendix B.

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

(iii) Reporting of spills of licensed material and excursions shall be done pursuant to Chapter 11 of the Non-Coal Rules and Regulations.

(iv) 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 call back 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)(iii) of this Chapter shall submit a written follow-up report as prescribed in Chapter 11 of the Non-Coal Rules and Regulations.

(C) Written reports prepared pursuant to other regulations 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) The term of the specific license is for a fixed term not to exceed ten (10) years.
- (b) Expiration of the specific license does not relieve the licensee of the requirements

of the Act, these rules, or existing license conditions.

(c) 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 or for release for long-term care and maintenance.

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

(e) 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.

(f) 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 license material;

(k) Remove radioactive contamination to the extent practicable;

(l) Properly dispose of the licensed material;

(m) Submit a completed Department Form URP-314 or equivalent; and

(n) Submit a radiation survey report to confirm the absence of radioactive material or to establish the levels of residual radioactive contamination, unless the licensee demonstrates the absence of residual radioactive contamination in some other manner. The licensee shall, as appropriate:

(A) Report levels of radioactivity, including alpha and beta in units of μCi per 100cm^2 removable and fixed for surfaces, μCi per milliliter for water, and pCi per gram for solids such as soils or concrete; and report levels of gamma radiation in units of microrentgen per hour at one meter from the surface.

(B) Specify the instrumentation used and certify that each instrument was properly calibrated and tested.

(C) If no residual radioactive contamination attributable to activities conducted under the license is detected, the licensee shall certify in writing that no detectable radioactive contamination was found (Department Form URP-314 or equivalent). The Department will notify the licensee, in writing, of the termination of the license.

(D) If detectable levels of residual radioactive contamination attributable to activities conducted under the license are found, the license continues in effect beyond the expiration date, if necessary, with respect to possession of residual radioactive material present as contamination until the Department notifies the licensee in writing that the license is terminated. During this time the licensee is subject to the provisions of subsection (c) of this section.

(g) In addition to the information provided in subsection (f) of this Section, the licensee shall submit a plan for decontamination within twelve (12) months after the time of license expiration, contemplating for the residual radioactive contamination remaining at the time the license expires.

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 Notification, 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 the regulations ; 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 in 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 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.

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

- (A) A decision analysis;
- (B) The final technical analysis conducted by the Department; and
- (C) An environmental impact analysis.

(iii) Upon issuance of the initial draft decision described in Section 15(a)(i), the Department shall initiate a public comment process and hold a public hearing. The Department shall publish notice of the public hearing in a newspaper of statewide or general circulation or on the Department's website at least forty-five (45) days 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.

(iv) Pursuant to the 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.

(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 principle 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 principle activities under the license have been conducted for a period of twenty-four (24) months; or no principle 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 NRC regulations.

(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 or 10 CFR Part 40, Appendix A, and began 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 Commission 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 10 CFR Part 40, Appendix A. 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 public 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) Except as provided in subparagraph (e) of this Section,

(i) Licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than twenty-four (24) months following the initiation of decommissioning.

(ii) Except as provided in subparagraph (f)(i) of this Section, when decommissioning involves the entire site, the licensee shall request license termination as soon as practicable but no later than twenty-four (24) months following the initiation of decommissioning.

(h) As the final step in decommissioning, the licensee shall:

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

(ii) Conduct a radiation survey of the premise where the licensed activities were carried out and submit a report of the results of this survey, unless the licensee after approval by the Department demonstrates in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in this Chapter or criteria in 10 CFR Part 40, Appendix A. The licensee shall, as appropriate:

(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.

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

(i) Source material has been properly disposed;

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

(iii) A radiation survey has been performed which demonstrates that:

(A) The premises are suitable for release in accordance with the applicable criteria for decommissioning found in 10 CFR Part 40, Appendix A; and

(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 10 CFR Part 40, Appendix A.

(iv) If the licensee has satisfied the applicable technical and other requirements for closure and reclamation of a byproduct material disposal site; and

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

(j) Specific licenses for uranium and thorium milling are exempt from subparagraph (e) of this section with respect to reclamation of tailings impoundments and/or waste disposal areas.

(k) 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 10 CFR Part 40, Appendix A 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 source material from

recovery or milling or byproduct material shall submit a plan for completion of decommissioning, if the procedures necessary to carry out decommissioning:

- (i) Have not been previously approved by the Department; or
- (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 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 subsection (f) of this Section, the licensee shall complete decommissioning of the site, separate buildings, or 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, 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 with 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 URP-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 or the requirements in Criterion 6(6) of 10 CFR Part 40, Appendix A. The licensee shall:

(A) Report levels of gamma radiation in units of microroentgen (millisievert) 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.

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WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION
URANIUM RECOVERY PROGRAM
CHAPTER 10
GENERAL LICENSES

Section 1. **Purpose.**

(a) This Chapter establishes requirements for general licenses applicable to source material from recovery or milling and the associated byproduct material. The general licenses provided in this part are effective without the filing of applications with the Department or the issuance of licensing documents to a particular person.

Section 2. **Scope.**

This Chapter applies to persons issued a general license by the Department.

Section 3. **Incorporation by Reference (IBR) of General Licenses.**

(a) Any reference in these rules to requirements or procedures contained in the Code of Federal Regulations (CFR), Title 10, Part 40.20, 40.21, 40.22, and 40.26 shall constitute the full adoption by reference of that part and subparts as they appear in 10 CFR, revised as of January 1, 2016, unless expressly provided otherwise in these rules. These rules do not include any later amendments or editions of the incorporated matter.

(b) 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 Uranium Recovery Program.

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION
URANIUM RECOVERY PROGRAM
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 W.S. 35-11-417 through -418 (2015) and 35-11-2003(e) (2015) for the establishment of financial assurance arrangements for licensees listed in these regulations. 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 CFR Part 40, Appendix A, Criterion 9, as incorporated by reference in Chapter 4 of these rules.

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 in circumstances where no permit exists the source material license.

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

(c) "Decommissioning Funding Plan" means a written and detailed cost estimate for decommissioning and a description of the method for assuring decommissioning, including means of adjusting cost estimates and funding levels periodically over the life of the facility.

(d) "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 and byproduct 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 financial arrangements for reclamation and long terms surveillance (discussed below) shall be sufficient to ensure compliance with those standards established by the Department pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long term management of such byproduct material and its disposal site.

(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 byproduct material disposal areas in accordance with the technical criteria delineated in 10 CFR Part 40, Appendix A.

(iv) Aquifer restoration which is based on the physical characteristics of the mining aquifer; the cost of equipment, labor, and administration; and any other data required under Chapter 11 of the Non-Coal Regulations for In Situ Mining for a well field data package.

(v) Take into account total costs that would be incurred if an independent contractor were 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.

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

(vi) All reasonable costs incurred by the Department, including indirect costs as defined in Chapter 7 of these rules, in conducting or overseeing the decontamination, decommissioning, and disposal activities.

(vii) Reasonable attorney fees that may be incurred by the Department for the

successful revocation, foreclosure, or realization of the financial assurances established by the licensee in accordance with this Chapter.

(d) Prior to approval of an application for a new license, an applicant shall establish financial assurance arrangements to ensure decontamination and decommissioning of the facility and where appropriate provide a fund adequate and sufficient to cover the payment of the cost for long term care and monitoring pursuant to Criteria 9 and 10 of 10 CFR Part 40, Appendix A.

(e) Applicants shall provide, and the Department shall approve, a signed executed original copy of each financial assurance instrument required by this Chapter.

(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. A signed executive 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 receipt or possession of licensed material, or injection operations into an approved Mine Unit.

Section 5. Acceptable Financial Assurance Methods.

(a) Refer to W.S. 35-11-418 (2015) for acceptable financial instruments and methods to establish an acceptable financial assurance.

(b) Self-insurance, or any arrangement that essentially constitutes self-insurance (for example, a contract with a state or federal agency), will not satisfy the financial assurance requirements since this provides no additional assurance other than that which already exists through license requirements.

(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 equivalent 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 instruments 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 instrument 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

Section 7. Long-Term Care and Maintenance Financial Assurances.

(e) In addition to the decommissioning warranty required by this Chapter, the Department may require licensees to provide a long-term care warranty of the licensed facility if the facility will remain a disposal site for byproduct material subsequent to the termination of the license, or the license will be terminated using the criteria in 10 CFR Part 20.140, 10 CFR 20.1404, and 10 CFR Part 40 Appendix A.

(i) The amount of funds to be provided by such long-term care warranties shall be based on Department-approved cost estimates and shall be sufficient to cover the annual costs of site surveillance, including reasonable administrative costs incurred, in perpetuity, subsequent to the termination of the license.

(ii) For each licensee going to long term care, the long term care warranty must have a minimum value equivalent to \$250,000 in 1978 dollars.

(A) The value of the long-term care warranty shall be adjusted annually to recognize inflation.

(I) The inflation rate to be used for this adjustment is that indicated by the change in the consumer price index published by the U.S. Department of Labor, Bureau of Labor Statistics.

(II) The Department may use other reasonable resources to analyze the inflation rate provided the amount of long-term care warranty is acceptable to the licensing agency and site caretaker.

(iii) Cost estimates for facilities and sites requiring long-term care subsequent to license termination are to be based on the final disposition of wastes such that ongoing active maintenance is not necessary to preserve isolation.

(A) It is expected that, as a minimum, annual site inspections shall be conducted to confirm the integrity of the stabilized waste systems and to determine the need, if any, for maintenance and/or monitoring.

(B) Cost estimates shall be adjusted if more frequent site inspections are required based on an evaluation of a particular site.

(iv) For sites decommissioned in accordance with 10 CFR Part 20.1403, 10 CFR Part 20.1404, and 10 CFR Part 40 Appendix A, cost estimates for long-term care subsequent to license termination must be sufficient to enable the Department or the United States Department of Energy (DOE) to:

(A) Perform periodic site inspections at least every five years;

(B) Assure the continuation of institutional controls; and

(C) Assume responsibilities and carry out any necessary control and maintenance of the site. Cost estimates shall be adjusted to account for more frequent site inspections as required by the Department.

(v) Upon the determination by the Department that disposal, decommissioning, and decontamination requirements have been satisfied, the Department shall transfer the custody of the site and any funds for long-term care to the appropriate regulatory agency assuming long term care and custody. Such funds include, but are not limited to, sums collected for long term surveillance (i.e. continued site observation, monitoring, and where necessary maintenance). Such funds do not however, include monies held as surety where no default has occurred and the reclamation or other bonded activity has been performed.

(A) If the value of the long-term care warranty funds exceed the amount required by the government agency overseeing the long-term care of the site, then all such excess amounts shall be returned to the licensee.

Section 8. Financial Assurance Recordkeeping.

(a) Licensees shall keep records throughout the life of the license of financial assurances, 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.

WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION
URANIUM RECOVERY PROGRAM
CHAPTER 1
GENERAL PROVISIONS

Section 1. Authority.

These rules and regulations are promulgated pursuant to the Wyoming Environmental Quality Act, W.S. 35-11-2001 *et seq* (2015). These rules and regulations are effective upon filing with the Secretary of State.

Section 2. Purpose.

It is the purpose of these rules to state such requirements as shall be applied in the use of source material from recovery or milling and the byproduct material from such recovery or milling activities such that the state 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

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 from recovery or milling or byproduct materials from such recovery or milling operations. 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).

Section 4. Incorporation by Reference (IBR) of CFR.

(a) **MORE STRINGENT AND BROADER-IN-SCOPE PROVISIONS.** Those State-specific rules that are more stringent than, or broader-in-scope than, the federal rules adopted by reference throughout these rules are described in detail in Appendix A, Table 1-1 of this Chapter.

(b) **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 adopted by reference throughout the Uranium Recovery Program 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, Uranium Recovery Program, 200W 17th Street, Lower Level, 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* (2015).
- (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 bequerel (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, as amended (42 U.S.C. § 2021).
- (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 CFR 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 offsite response organizations to protect persons offsite.

(k) "Alternate Feed Processing" means the processing of any other matter other than mined natural or native matter from which source material [i.e. uranium or thorium] is extracted in a licensed uranium or thorium mill as authorized by RIS 00-023: Recent Changes to Uranium Recovery Policy dated November 30, 2000 and NRC regulatory Issue Summary 2012-06 NRC Policy Regarding Submittal of Amendments for Processing of Equivalent Feed at Licensed Uranium Recovery Facilities, dated April 16, 2012.

(l) "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).

(m) "As Low as 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..

(n) "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.

(o) "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.

(p) "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.

Background radiation does not include sources of radiation from radioactive materials regulated by the NRC or agreement states.

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

(r) "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.

(s) "Byproduct Material" means the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content as defined in section 11e. (2) of the AEA (42 U.S.C § 2014(e)(2) (2015)).

(t) "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.

(u) "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.

(v) "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.

(w) "Commencement of Construction" means taking any action defined as construction or any other activity at the site of a facility subject to these regulations that has a reasonable nexus to radiological health or safety.

(x) "Commission" means the U.S. Nuclear Regulatory Commission or its duly authorized representatives. Nuclear Regulatory Commission (NRC) is an equivalent term.

(y) "Committed Dose Equivalent (HT 50)" means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

(z) "Committed Effective Dose Equivalent (HE 50)" is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues. ($H_{E50} = \sum W_T H_{T50}$).

(aa) "Constraint (dose constraint)" means a value above which specified licensee actions are required.

(ab) "Construction" means the installation of wells associated with the radiological operations (e.g., production, injection, or monitoring well networks associated with in-situ recovery or other facilities), the installation of foundations, or in-place assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in these rules and regulations that are related to radiological safety or security. The term "construction" does not include:

(i) Changes for temporary use of the land for public recreational purposes;

(ii) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;

(iii) Preparation of the site for construction of the facility, including clearing of the site, grading, installation of drainage, erosion, and other environmental mitigation measures, and construction of temporary roads and borrow areas;

(iv) Erection of fences and other access control measures that are not related to the safe use of, or security of, radiological materials subject to these Regulations;

(v) Excavation;

(vi) Erection of support buildings (e.g. construction equipment storage sheds, warehouses and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility;

(vii) Building of service facilities (e.g., paved roads, parking lots, railroad spurs, exterior utility, and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines);

(viii) Procurement of fabrication of components or portions of the proposed facility occurring at other than the final, in place location at the facility; or

(xi) Taking any other action that has no reasonable nexus to

(A) Radiological health and safety

(ac) "Contamination" means the presence of radioactive substance on a surface in quantities in excess of unrestricted release limits. For limits on transportation please refer to 10 CFR Part 71.4. For uranium recovery operations please refer to Regulatory Guide 8.30 Health Physics Surveys in Uranium Recovery Facilities Section 2.5 Table 2 which states that contamination exists in two phases. Additionally for areas where beta and gamma contamination exist please refer to the references in Table 2 of Regulatory Guide 8.30.

(i) Fixed radioactive contamination means radioactive contamination that cannot be removed from a surface during normal conditions. Limits for fixed contamination are 5,000dpm per 100cm² averaged over an area no more than 1m² and not exceeding 15,000 dpm per 100cm² for both alpha and beta emitters.

(ii) Non-fixed or removable radioactive contamination means radioactive contamination that can be removed from a surface during normal conditions. Non-fixed or removable contamination limit are 1000 dpm per 100cm² for both alpha and beta emitters.

(ad) "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.

(ae) "Critical Group" means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

(af) "Curie" means a unit of measurement of activity. One curie (Ci) is that quantity of radioactive material which decays at the rate of 3.7×10^{10} disintegrations or transformations per second (dps or tps).

(ag) "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.

(ah) "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.

(ai) "Deep Dose Equivalent (H_d)" which applies to external whole body exposure,

means the dose equivalent at a tissue depth of 1cm (1000 mg/cm²).

(aj) "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.

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

(al) "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 CFR Part 20 Appendix B Table 1 Column 3.

(am) "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).

(an) "Direct Disposal" means disposal of non-11e. (2) byproduct material in a uranium mill tailings impoundment as authorized by RIS 00-023: Recent Changes to Uranium Recovery Policy dated November 30, 2000.

(ao) "Disposal 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 a disposable half-mask respirators or a disposable escape-only self-contained breathing apparatus (SCBA).

(ap) "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.

(aq) "Dose" means 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.

(ar) "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).

(as) "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.

(at) "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.

(au) "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 ($H_E = \sum W_T H_T$).

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

(aw) "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.

(ax) "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.

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

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

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

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

(bc) "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.

(bd) "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.

(be) "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.

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

(bg) "Generally Applicable Environmental Radiation Standards" means standards issued by the U.S. Environmental Protection Agency under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

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

(bi) "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 (1mSv), in 1 hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

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

(bk) "Individual" means any human being.

(bl) "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.

(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.

(bm) "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.

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

(bo) "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).

(bp) "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 the programs regulations.

(bq) "Licensee" means a person who is licensed by the Department in accordance with the Act and the programs regulations.

(br) "Licensed material" means source material from recovery or milling and 11e. (2) byproduct material received, possessed, used or transferred or disposed of under a license issued by the Department.

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

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

(bu) "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.

(bv) "Low Specific Activity (LSA) Material" means radioactive material with limited specific activity which is non-fissile or is accepted under 10 CFR Part 71.15, and which satisfies the description and limits set forth in the following section. Shielding materials surrounding the LSA material may not be considered in determining the estimated average specific activity of the package contents. The LSA material must be in one of three groups.

(i) LSA-I:

(A) Uranium and thorium ores, concentrates of uranium and thorium ores, and other ores containing naturally occurring radionuclides that are intended to be processed for the use of these radionuclides;

(B) Natural uranium, depleted uranium, natural thorium or their

compounds or mixtures, provided they are unirradiated and in solid or liquid form;

(C) Radioactive material other than fissile material, for which the A_2 value is unlimited; or

(D) Other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the value for exempt material activity concentration determined in accordance with 10 CFR Part 71 appendix A.

(ii) LSA-II:

(A) Water with tritium concentration up to 0.8 TBq/liter (20.0 Ci/liter), or

(B) Other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 10^{-4} A_2/g for solids and gases, and 10^{-5} A_2/g for liquids.

(iii) LSA-III Solids (e.g., consolidated wastes, activated materials), excluding powders, that satisfy the requirements of 10 CFR Part 71.77, in which:

(A) The radioactive material is distributed throughout a solid or collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.);

(B) The radioactive material is relatively insoluble, or it is intrinsically contained in a relative insoluble material, so that even under loss of packaging, the loss of radioactive material per package by leaching, when placed in water for 7 days will not exceed 0.1 A_2 ; and

(C) The estimated average specific activity of the solid, excluding any shielding material, does not exceed 2×10^{-3} A_2/g .

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

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

(by) "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.

(bz) "Natural Thorium" means thorium with the natural occurring distribution of thorium isotopes (essentially 100 weight percent thorium-232)

(ca) "Natural Uranium" means uranium (which may be chemically separated) with the naturally occurring distribution of uranium isotopes (approximately 0.711 weight percent uranium-235 and the remainder by weight essentially uranium-238).

(cb) "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.

(cc) "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.

(cd) "Nuclear Regulatory Commission (NRC)" means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

(ce) "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. Occupational 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 CFR Part 35.75, from voluntary participation in medical research programs, or as a member of the public.

(cf) "Ore" means a natural or native matter(not a material licensed by the State) that may be mined and treated for the extraction of any of its constituents or any other matter from which source material [i.e. uranium or thorium] is extracted in a licensed uranium or thorium mill as authorized by RIS 00-023: Recent Changes to Uranium Recovery Policy dated November 30, 2000 and NRC regulatory Issue Summary 2012-06 NRC Policy Regarding Submittal of Amendments for Processing of Equivalent Feed at Licensed Uranium Recovery Facilities, dated April 16, 2012.

(cg) "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision or political entity of this State or of another state, any foreign government or nation, or a legal successor, representative, agent or agency of the foregoing.

"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, interstate body or other legal entity, or legal successor, representative, agent or agency of the foregoing.

(ch) "Physician" means a medical doctor or doctor of osteopathy licensed by the 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.

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

(cj) "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.

(ck) "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.

(cl) "Principal Activities" as used in these regulations, 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

(cm) "Program" means the State's Uranium Recovery Program.

(cn) "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 CFR Part 35.75, or from voluntary participation in medical research programs.

(co) "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.

(cp) "Quality factor (Q)" means the modifying factor, listed in Tables 1 of Section 7 of this Chapter that is used to derive dose equivalent from absorbed dose.

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

(cr) "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.

(cs) "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.

(ct) "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.

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

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

(cw) "Recovery or Milling" refers to the definition in W.S. 35-11-103 (2016).

(cx) "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.

(cy) "Residual Radioactive Material" means (1) Waste (which the Secretary of Energy determines to be radioactive) in the form of tailings resulting from the processing of ores for the extraction of uranium and other valuable constituents or the ores; and (2) other waste (which the Secretary of Energy determines to be radioactive) at a processing site which relates to such processing, including any residual stock of unprocessed ores or low-grade materials. This term is used only with respect to materials at sites subject to remediation under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 as amended.

(cz) "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 CFR Part 20 which is incorporated by reference in Uranium Recovery Program Regulations Chapter 3.

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

(db) "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.

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

(dd) "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.

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

(df) "Shallow Dose Equivalent (Hs)" 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/cm²).

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

(dh) "Site" means the area within the boundary of a location under the control of a person using or storing radioactive material or at which a source of radiation is located.

(di) "Site Area Emergency" means events 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 offsite organizations to protect persons offsite.

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

(dk) "Source material" means:

(i) uranium or thorium, or any combination thereof, in any physical or chemical form, or

(ii) ores which contain by weight one-twentieth of one percent (0.05 percent), or more of uranium, thorium, or any combination thereof. Source material does not include special nuclear material.

(dl) "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 $6.77\text{E-}7$ Ci per gram of U.

(dm) "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 incidences are examples of

stochastic effects.

(dn) "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.

(do) "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.

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

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

(dr) "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.

(ds) "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.

(dt) "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.

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

(dv) "Uranium Fuel Cycle" means the operations of milling of uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity by a light-water-cooled nuclear power plant using uranium fuel, and reprocessing of spent uranium fuel to the extent that these activities directly support the production of electrical power for the public use. Uranium fuel cycle does not include mining operations, handling of unrefined and unprocessed ore, operations at waste disposal sites, transportation of radioactive material in support of these operations, and the reuse of recovered non-uranium special nuclear and byproduct materials from the cycle.

(dw) "Uranium milling" means any activity that results in the production of byproduct material as defined in W.S.35-11-103 (2016). See also Recovery or Milling.

(dx) "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.

(dy) "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.

(dz) "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.

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

(eb) "Weighting Factor (W_T)" means 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.

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

(ed) "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.

(ee) "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.

(ef) "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.

(eg) "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. Definitions applicable solely to criteria listed in 10 CFR Part 40 Appendix A.

The following definitions apply only to criteria listed in 10 CFR Part 40 Appendix A which outline the operation of Uranium Mills and disposition of tailings or wastes produced by the extraction or concentration of source material from ores processed primarily for their source material content.

(a) "Aquifer" means a geological formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs. Any saturated zone created by uranium or thorium recovery operations would not be considered an aquifer unless the zone is potentially (1) hydraulically interconnected to a natural aquifer, (2) capable of discharge to surface water, or (3) reasonably accessible because of migration beyond the vertical projection of the boundary of the land transferred for long-term government ownership and care in accordance with 10 CFR Part 40 Appendix A Criterion 11.

(b) "As expeditiously as practicable considering technological feasibility", for the purpose of 10 CFR Part 40 Appendix A Criterion 6A, means as quickly as possible considering: the physical characteristics of the tailings and the site; the limits of available technology; the need for consistency with the mandatory requirements of other regulatory programs; and factors beyond the control of the licensee. The phrase permits consideration of cost of compliance only to the extent specifically provided for by use of the term available technology.

(c) "Available Technology" means technologies and methods for emplacing a final radon barrier on uranium mill tailings piles or impoundments. This term shall not be construed to include extraordinary measures or techniques that would impose costs that are grossly excessive as measured by practice within the industry (or one that is reasonably analogous), (such as, by way of illustration only, unreasonable over time, staffing, or transportation requirements, etc., considering normal practice in the industry; laser fusion of

soil, etc.), provided there is reasonable progress toward emplacement of the final radon barrier. To determine grossly excessive costs, the relevant baseline against which costs shall be compared is the cost estimate for tailings impoundment closure contained in the licensee's approved reclamation plan, but costs beyond these estimates shall not automatically be considered grossly excessive.

(d) "Closure" means the activities following operations to decontaminate and decommission the buildings and site used to produce byproduct materials and reclaim the tailings and/or waste disposal area.

(e) "Closure Plan" means the Commission approved plan to accomplish closure.

(f) "Compliance Period" begins when the Commission sets secondary groundwater protection standards and ends when the owner or operator's license is terminated and the site is transferred to the State or Federal agency for long-term care.

(g) "Dike" means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

(h) "Disposal Area" means the area containing byproduct material to which the requirements of 10 CFR Part 40 Appendix A Criterion 6 apply.

(i) "Existing Portion" means the land surface area of an existing surface impoundment on which significant quantities of uranium or thorium byproduct materials had been placed prior to September 30, 1983.

(j) "Factors Beyond the Control of the Licensee" means factors proximately causing delay in meeting the schedule in the applicable reclamation plan for the timely emplacement of the final radon barrier notwithstanding the good faith efforts of the licensee to complete the barrier in compliance with paragraph (1) of 10 CFR Part 40 Appendix A Criterion 6A. These factors may include but are not limited to:

- (i) Physical conditions at the site;
- (ii) Inclement weather or climate conditions;
- (iii) An act of God;
- (iv) An act of war;

(v) A judicial or administrative order or decision, or change to the statutory, regulatory, or other legal requirements applicable to the licensee's facility that would preclude or delay the performance of activities required for compliance;

- (vi) Labor disturbances;

(vii) Any modifications, cessation or delay ordered by State, Federal, or local agencies;

(viii) Delays beyond the time reasonably required in obtaining necessary government permits, licenses, approvals, or consent for activities described in the reclamation plan proposed by the licensee that result from agency failure to take final action after the licensee has made a good faith, timely effort to submit legally sufficient applications, responses to request (including relevant data requested by the agencies), or other information, including approval of the reclamation plan; and

(xi) An act or omission of any third party over whom the licensee has no control.

(k) "Final Radon Barrier" means the earthen cover (or approved alternative cover) over tailings or waste constructed to comply with 10 CFR Part 40 Appendix A Criterion 6 of this appendix (excluding erosion protection features).

(l) "Groundwater" means water below the land surface in a zone of saturation. For purposes of 10 CFR Part 40 Appendix A, groundwater is the water contained within an aquifer as defined above.

(m) "Leachate" means any liquid, including any suspended or dissolved components in the liquid that has percolated through or drained from the byproduct material.

(n) "Licensed Site" means the area contained within the boundary of a location under the control of persons generating or storing byproduct materials under a Commission or an agreement state license.

(o) "Liner" means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment which restricts the downward or lateral escape of byproduct material, hazardous constituents, or leachate.

(p) "Milestone" means an action or event that is required to occur by an enforceable date.

(q) "Operations" this definition is specific for uranium or thorium tailings and means that a uranium or thorium mill tailings pile or impoundment is being used for the continued placement of byproduct material or is in standby status for such placement. A pile or impoundment is in operation from the day that byproduct material is first placed in the pile or impoundment until the day final closure begins.

(r) "Point of Compliance" is the site specific location in the uppermost aquifer where the groundwater protection standard must be met.

(s) "Reclamation Plan" for the purposes of 10 CFR Part 40 Appendix A Criterion 6A means the plan detailing activities to accomplish reclamation of the tailings or waste disposal area in accordance with the technical criteria in this appendix. The reclamation plan must include a schedule from reclamation milestones that are key to the completion of the final radon barrier including as appropriate, but not limited to, windblown tailings retrieval and placement on the pile, interim stabilization (including dewatering or the removal of freestanding liquids and recontouring), and final radon barrier construction. [Reclamation of tailings must also be addressed in the closure plan; the detailed reclamation plan may be incorporated into the closure plan].

(t) "Surface Impoundment" means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well.

(u) "Uppermost Aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

Section 7. 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 8. 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 9. Communication and Referenced Materials.

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

Section 10. Interpretations.

Except as specifically authorized by the agency in writing, no interpretation of the meaning of this chapter or any other chapters by any officer or employee of the Department other than a written interpretation by the Attorney General's Office will be considered binding upon the agency.

Section 11. 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 under this chapter 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) Deliberately submit to the Department any information that the person knows to be incomplete or inaccurate. This includes licensees, and contractors and subcontractors to licensees.

(iii) 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 or a contractor or subcontractor of a licensee.

Section 12. 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)(2016).

(b) Additionally, the Department authorizes exemptions for the possession, use, transfer, or acquisition of any source material from milling or byproduct material from such process to any U.S. Department of Energy contractor or subcontractor and any U.S Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within this State:

(i) Prime contractors performing work for the U.S. Department of Energy at U.S. Government owned or controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;

(ii) Prime contractors of the U.S. Department of Energy performing research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof;

(iii) Prime contractors of the U.S. Department of Energy using or operating nuclear reactors or other nuclear devices in the U.S. Government owned vehicles or vessels; and

(iv) Any other prime contractor or subcontractor of the U.S. Department of Energy or the U.S. Nuclear Regulatory Commission when the State and the U.S. Nuclear Regulatory Commission determine that:

(A) The exemption of the prime contractor or subcontractor is authorized by law, and

(B) 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.

Section 13. **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) Additional records requirements are specified elsewhere in these rules. If the record retention period is not specified, the record shall be maintained for a period of three years.

10 CFR PART 40

Please Note: The bracket “[]” around a compatibility category designation means that the Section may have been adopted elsewhere in a State rules and it is not necessary to adopt it again.

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|-------------------------------------|--------------------------|---|------------------------------|-------------------------------|---|
| §40.1 | Purpose | Chpt 4 Sec1 | D | YES | NO | Compatibility D Adjusted for Use by the State |
| §40.2 | Scope | Chpt 4 Sec 2 | D | YES | NO | Compatibility D Adjusted for Use by the State |
| §40.2a | Coverage of inactive tailings sites | Ch 4 Sec 2(b) | A- States with authority to regulate uranium mill activities (11e.(2) byproduct material) | YES | YES | State modeled CRCPD suggested State Language Chapter U Sec U.2-Scope. |
| | | | | | | |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|----------------------|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.3 | License requirements | Ch 4 Sec 2(c) | C | YES | YES | Slight difference in wording |
| §40.4 | Definitions | | | | | |
| | Act | Ch 1, Sec 5(b) | D | YES | YES | Compatibility D Adjusted for Use by the State. Act refers to the Wyoming Environmental Quality Act. When referring to the Atomic Energy Act the full reference will be written out |
| | Agreement State | Ch 1, Sec 5(f) | B | YES | NO | The Act is replaced with "Atomic Energy Act of 1954, as amended " |
| | Alert | Ch 1, Sec 5(j) | [A] | No | | |
| | Byproduct material | Ch 1, Sec 5(s) | H&S | YES | YES | Only the definition related to the scope of authority that the State is seeking was included in the definition. Further clarification of the definition was added by referencing the definition in section 11(e)(2) of the AEA. |
| | | | | | | |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|--|--------------------------|---|------------------------------|-------------------------------|---|
| | Commencement of construction Paragraph 1 | Ch1, Sec 5(w) | C for States authority to regulate uranium mill activities (11e.(2)) | No | | |
| | Commencement of construction Paragraph 2 | | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| | Commission | Ch 1, Sec 5(x) | D | YES | NO | Added verbiage to make NRC an equivalent term |
| | Construction Paragraph 1-8, 9i | Ch 1, Sec 5(ab) | C for States authority to regulate uranium mill activities (11e.(2)) | No | | |
| | Construction, Paragraph 9ii | | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|----------------------|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| | Corporation | | D | YES | NO | Compatibility D Not included in State Regulations |
| | Decommission | Ch1, Sec 5(ah) | [C] | No | | |
| | Department of Energy | NA | [D] | YES | NO | Compatibility D Not included in State Regulations |
| | Depleted uranium | NA | A | YES | YES | Depleted Uranium is outside the scope of material the State is assuming |
| | Effective kilogram | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| | Foreign obligations | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| | Government agency | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| | License | Ch1, Sec 5(bp) | [D] | YES | NO | Compatibility D Adjusted for Use by the State |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|-------------------------------|--------------------------|---|------------------------------|-------------------------------|--|
| | Persons | Ch 1, Sec 5(cg) | [C] | YES | NO | Adjusted for Use by the State. Changes did not alter the intent of the definition. |
| | Pharmacist | NA | [D] | YES | NO | Compatibility D Not included in State Regulations |
| | Physician | Ch 1, Sec 5(ch) | [D] | NO | | |
| | Principal activities | Ch 1, Sec 5(cl) | [D] | NO | | |
| | Reconciliation | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| | Residual radioactive material | Ch 1, Sec 5(cy) | A- States with authority to regulate uranium mill activities (11.e(2) byproduct material) | No | | |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|-------------------------------|--------------------------|---|------------------------------|-------------------------------|--|
| | Site area emergency | Ch 1, Sec 5(di) | [A] | No | | |
| | Source material | Ch 1, Sec 5(dk) | [A] | No | | |
| | Special nuclear material | NA | A | YES | YES | This definition is not applicable to the scope of authority that Wyoming is seeking, therefore the definition is not included. |
| | Transient shipment | NA | [D] | YES | NO | Compatibility D Not included in State Regulations |
| | United States | NA | [D] | YES | NO | Compatibility D Not included in State Regulations |
| | Unrefined and unprocessed ore | Ch 1, Sec 5(ds) | B | No | | |
| | Uranium enrichment facility | NA | [D] | YES | NO | Compatibility D Not included in State Regulations |
| | Uranium milling | Ch 1, Sec 5(dw) | A States with authority to regulate uranium mill activities | Yes | Yes | We point to W.S. 35-11-103 rather than "as defined in this part" (10 cfr 40) |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|---|--------------------------|------------------------------------|------------------------------|-------------------------------|--|
| | | | (11.e(2) byproduct material) | | | |
| §40.5 | Communications | Ch 4, Sec 5 | D | YES | NO | Compatibility D Adjusted for use by the State. |
| §40.6 | Interpretations | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| §40.7 | Employee protection | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| §40.8 | Information collection requirements: OMB approval | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| §40.9 | Completeness and accuracy of information | Ch 4 Sec 5(d) & 5(e) | D | N/A | | |
| §40.10 | Deliberate misconduct | Ch 4 Sec 4 | C | YES | YES | Different language preserves important principles. |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|--|--|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.11 | Persons using source material under certain Department of Energy and Nuclear Regulatory Commission contracts | Ch 4 Sec 6(f) | B | YES | YES | Content is there but is formatted different |
| §40.12 (a) | Carriers | Ch 4 Sec 6(e) | B | | | |
| §40.12 (b) | Carriers | | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.13 (a), (b), (c), (d) except for (c)(5)(iv) | Unimportant quantities of source material | Ch 4 Sec 6 | B | YES | YES | 40.13(c) is not included in the State's regulations as this type of material is not included in the scope of material Wyoming is seeking. Those exemptions would still be through the NRC |
| §40.13 (c)(5)(iv) | Unimportant quantities of source material | | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|--|--------------------------|-----------------------------------|------------------------------|-------------------------------|--|
| §40.14 | Specific exemptions | Ch 4 Sec 6(d) | D | YES | NO | Compatibility D Adjusted for State use |
| §40.20 ⁱ (a) | Types of licenses | Ch 10 Sec 3(a) | C | NO | | Incorporation by reference |
| §40.20 (b) & (c) | Types of licenses | Ch 10 Sec 3(a) | D | NO | | Incorporation by reference |
| §40.21 | General license to receive title to source or byproduct material | Ch 10 Sec 3(a) | C | NO | | Incorporation by reference |
| §40.22 (a), (b)(1)-(3), (b)(5) | Small quantities of source material | Ch 10 Sec 3(a) | B | NO | | Incorporation by reference |
| §40.22 (b)(4) | Small quantities of source material | Ch 10 Sec 3(a) | D | NO | | Incorporation by reference |
| §40.22 (c) | Small quantities of source material | Ch 10 Sec 3(a) | C | NO | | Incorporation by reference |
| §40.22 (d) | Small quantities of source material | Ch 10 Sec 3(a) | B | NO | | Incorporation by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|---|--------------------------|---|------------------------------|-------------------------------|---|
| §40.22 (e) | Small quantities of source material | Ch 10 Sec 3(a) | B | NO | | Incorporation by reference |
| §40.23 | General license for carriers of transient shipments of natural uranium other than in the form of ore or ore residue | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.25 | General license for use of certain industrial products or devices | NA | C | YES | YES | Involves depleted uranium which is outside the scope of material sought by the State. |
| §40.26 | General license for possession and storage of byproduct material as defined in this part | Ch 10 Sec 3(a) | C- States with authority to regulate uranium mill activities (11e.(2) byproduct material) | NO | | Incorporation by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|--|---|------------------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.27 | General license for custody and long-term care of residual radioactive material disposal sites | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.28 | General license for custody and long-term care of uranium or thorium byproduct materials disposal sites | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.31 (a), (b), (c), (d), (e), (f), (g), & (h) | Application for specific licenses | Ch 4 Sec 8 and 9 | D | YES | NO | Compatibility D Adjusted for State use |
| §40.31 (i) | Application for specific licenses | Ch 6 & 10 CFR 40 App A (IBR) | H&S | YES | NO | Covers financial assurance obligations |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.31 (j), (k), (l), & (m) | Application for specific licenses | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.32 (a) & (f) | General requirements for issuance of specific licenses | Ch 4 Sec 8 | D | YES | NO | Compatibility D Adjusted for State use |
| §40.32 (b), (c), and the portions of paragraph (e) which apply to uranium mills for States with uranium mill authority | General requirements for issuance of specific licenses | Ch 4 Sec 8 Ch 4 Sec 7 | H&S | YES | NO | Change in format |
| §40.32 (d), (g), and those portions of paragraph (e) which apply to | General requirements for issuance of specific licenses | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|--|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| uranium enrichment and uranium hexafluoride facilities | | | | | | |
| §40.33 | Issuance of a license for a uranium enrichment facility | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.34 (a)(1),(b)(c) | Special requirements for issuance of specific licenses | NA | D | YES | NO | Modified for State use |
| §40.34 (a)(2)&(a)(3) | Special requirements for issuance of specific licenses | NA | B | YES | YES | These items deal with depleted uranium which is outside the scope of authority that Wyoming is seeking. |
| §40.35 (a) | Conditions of specific licenses issued pursuant to §40.34 | NA | C | YES | YES | These items deal with depleted uranium which is outside the scope of authority that Wyoming is seeking. |
| §40.35 (b) & (c) | Conditions of specific licenses | NA | B | YES | YES | These items deal with depleted uranium which is outside the scope |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|--|
| | issued pursuant to §40.34 | | | | | of authority that Wyoming is seeking. |
| §40.35 (d), (e), & (f) | Conditions of specific licenses issued pursuant to §40.34 | NA | D | YES | YES | These items deal with depleted uranium which is outside the scope of authority that Wyoming is seeking. |
| §40.36 (a), (b), & (d), (f) | Financial assurance and recordkeeping for decommissioning | NA | H&S | YES | YES | Financial Assurance requirements are set forth in 10 CFR Part 40 Appendix A and 40.36 is not applicable to scope of material the State is seeking. |
| §40.36 (c), (e) & (g) | Financial assurance and recordkeeping for decommissioning | NA | D | YES | YES | Financial Assurance requirements are set forth in 10 CFR Part 40 Appendix A and 40.36 is not applicable to scope of material the State is seeking. |
| §40.38 | Ineligibility of certain applicants | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.41 (a)(b)(c) | Terms and conditions of licenses | Ch 4 Sec 8 | C | YES | NO | Wording different but intent of the rules are captured |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|--|--|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.41 (d), (e)(1), (e)(3), (g) & (h) | Terms and conditions of licenses | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.41 (e)(2)&(e)(4) | Terms and conditions of licenses | Ch 4 Sec 8(e) | D | YES | NO | Compatibility D adjusted for State use |
| §40.41 (f) | Terms and conditions of licenses | Ch 4 Sec 8(h) | H&S | YES | NO | Adapted to fit State Regulations |
| §40.42 (a), (b) & (k)(4) | Expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas | Ch 4 Sec 11-14 | D | YES | NO | Compatibility D adapted to State Regulations |
| §40.42 | Expiration and termination of | Ch4 | H&S | YES | NO | Minor changes in language principles are maintained |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|--|--|--|-----------------------------------|------------------------------|-------------------------------|---|
| (c), (d), (e), (f), (g), (h), (i),(j), (k)(1), (k)(2), (k)(3), (l) | licenses and decommissioning of sites and separate buildings or outdoor areas | Sec 11(c), 16(a), 16(b), 16(i) 17, | | | | |
| §40.43 | Renewal of licenses | Ch 4 Sec 12(a) | D | YES | NO | Compatibility D Adjusted for State use |
| §40.44 | Amendment of licenses at request of licensee | Ch 4 Sec 13 | D | YES | NO | Compatibility D Adjusted for State use |
| §40.45 | Commission action on application to renew or amend | Ch 4 Sec 13(a) | D | YES | NO | Compatibility D Adjusted for State use |
| §40.46 | Inalienability of licenses | Ch 4 Sec 8(e) | C | YES | YES | The administrator determines the information that is needed for submittal during a transfer |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|--|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.51 (a),(b)(1)- (5), (b)(7), (c),(d) | Transfer of source or byproduct material | Ch 4 Sec 3(a) | C | NO | | Incorporation by reference |
| §40.51 (b)(6) | Transfer of source or byproduct material | Ch 4 Sec 3(a) | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.52 | Certain items containing source material; requirements for license to apply or initially transfer | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.53 | Conditions for licenses issued for initial transfer of certain items containing source material: Quality control, labeling, and records and reports | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|--|
| §40.54 | Requirements for license to initially transfer source material for use under the 'small quantities of source material' general license | Ch 4 Sec 3(a) | B | NO | | Incorporation by reference |
| §40.55 (a), (b), (c), (d) | Conditions of licenses to initially transfer source material for use under the 'small quantities of source material' general license: Quality control, labeling, safety instructions, and records and reports | Ch 4 Sec 3(a) | B | NO | | Incorporation by reference |
| | | | | | | |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.55 (e) | Conditions of licenses to initially transfer source material for use under the 'small quantities of source material' general license: Quality control, labeling, safety instructions, and records and reports | Ch 4 Sec 3(a) | C | NO | | Incorporation by reference |
| §40.56 | Restrictions on the use of Australian-obligated source materials | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.60 (a),(b),(c)(1) &(2) | Reporting requirements | Ch 4 Sec 10 | C | YES | NO | Formatted different |
| §40.60 (c)(3) | Reporting requirements | NA | D | YES | NO | Compatibility D Not included in State Regulations |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|---|--------------------------|---|------------------------------|-------------------------------|---|
| §40.61 (a)(b) | Records | Ch 4 Sec 3(a) | C | NO | | Incorporation by reference |
| §40.61 (c)(f) | Records | Ch 4 Sec 3(a) | D | NO | | Incorporation by reference |
| §40.61 (d)(e) | Records | Ch 4 Sec 3(a) | H&S | NO | | Incorporation by reference |
| §40.62 | Inspections | Ch 2 Sec (a) | D | YES | NO | Slightly modified for State Use |
| §40.63 | Tests | Ch 2 Sec (b) | D | YES | NO | Compatibility D Adjusted for State use |
| §40.64 | Reports | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.65 | Effluent monitoring reporting requirements | Ch 4 Sec 10(b) | C - States with authority to regulate uranium mill activities (11e.(2) byproduct material) | YES | NO | Modified language to fit State Rules |
| | | | | | | |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|---|
| §40.66 | Requirements for advance notice of export shipments of natural uranium | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.67 | Requirement for advance notice of importation of natural uranium from countries that are not party to the Convention on the Physical Protection of Nuclear Material | NA | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| §40.71 | Modification and revocation of licenses | Ch 4 Sec 14 | D | YES | NO | Modified Slightly for State Use |
| §40.81 | Violations | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| §40.82 | Criminal penalties | NA | D | YES | NO | Compatibility D Not included in State Regulations |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|--|--------------------------|---|------------------------------|-------------------------------|--|
| APPENDIX A | Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content | Ch 4 Sec 3(a) | Definitions - A for States with authority to regulate uranium mill activities (11e.(2) byproduct material) Criterion 11A.thru F and Criterion 12 are NRC. All of the remaining portions of the section are C-for States with authority to regulate uranium mill activities | NO | | Incorporation by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|--|--------------------------|-----------------------------------|------------------------------|-------------------------------|--|
| APPENDIX A | <i>Introduction</i> | Ch 4, Sec 3(a) | C | NO | | |
| APPENDIX A | <i>Aquifer</i> | Ch1, Sec 5(a) | A | NO | | |
| APPENDIX A | <i>As expeditiously as practicable considering technological feasibility</i> | Ch 1, Sec 5(b) | A | NO | | |
| APPENDIX A | <i>Available technology</i> | Ch 1, Sec 5(c) | A | NO | | |
| APPENDIX A | <i>Closure</i> | Ch 1, Sec 5(d) | A | No | | |
| APPENDIX A | <i>Closure plan</i> | Ch 1, Sec 5(e) | A | No | | |
| APPENDIX A | <i>Compliance period</i> | Ch 1, Sec 5(f) | A | No | | |
| APPENDIX A | <i>Dike</i> | Ch 1, Sec 5(g) | A | No | | |

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| APPENDIX A | <i>Disposal area</i> | Ch 1, Sec 5(h) | A | YES | NO | Reference to Criterion 6 is changed to the full reference 10 CFR 40 App A criterion 6 |
| APPENDIX A | <i>Existing portion</i> | Ch 1, Sec 5(i) | A | No | | |
| APPENDIX A | <i>Factors beyond the control of the licensee</i> | Ch 1, Sec 5(j) | A | YES | NO | Reference to Criterion 6 is changed to the full reference 10 CFR 40 App A criterion 6 |
| APPENDIX A | <i>Final radon barrier</i> | Ch 1, Sec 5(k) | A | YES | NO | Reference to Criterion 6 is changed to the full reference 10 CFR 40 App A criterion 6 |
| APPENDIX A | <i>Ground water</i> | Ch 1, Sec 5(l) | A | YES | NO | Reference to Criterion 6 is changed to the full reference 10 CFR 40 App A criterion 6 |
| APPENDIX A | <i>Leachate</i> | Ch 1, Sec 5(m) | A | No | | |
| APPENDIX A | <i>Licensed site</i> | Ch 1, Sec 5(n) | A | No | | |
| APPENDIX A | <i>Liner</i> | Ch 1, Sec 5(o) | A | No | | |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
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| APPENDIX A | <i>Milestone</i> | Ch 1, Sec 5(p) | A | No | | |
| APPENDIX A | <i>Operation</i> | Ch 1, Sec 5(q) | A | Yes | No | The State adds “this definition is specific for uranium or thorium tailings” |
| APPENDIX A | <i>Point of compliance</i> | Ch 1, Sec 5(r) | A | No | | |
| APPENDIX A | <i>Reclamation plan</i> | Ch 1, Sec 5(s) | A | No | | |
| APPENDIX A | <i>Surface impoundment</i> | Ch 1, Sec 5(t) | A | No | | |
| APPENDIX A | <i>Uppermost aquifer</i> | Ch 1, Sec 5(u) | A | No | | |
| APPENDIX A, I. Technical Criteria | <i>Criterion 1</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 2</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
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| APPENDIX A, I. Technical Criteria | <i>Criterion 3</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 4</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 5</i> | Ch 4 Sec 3(a) | C | NO | | Criteria 5A-5D and new Criterion 13 incorporate the basic ground-water protection standards imposed by the Environmental Protection Agency in 40 CFR Part 192, Subparts D and E (48 FR 45926; October 7, 1983) which apply during operations and prior to the end of closure. Ground-water monitoring to comply with these standards is required by Criterion 7A. |
| APPENDIX A, I. Technical Criteria | <i>Criterion 5A</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
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| APPENDIX A, I. Technical Criteria | <i>Criterion 5B</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 5C</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 5D</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 5E</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 5F</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 5G</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
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| APPENDIX A, I. Technical Criteria | <i>Criterion 5H</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 6</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 6A</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 7</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 7A</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, I. Technical Criteria | <i>Criterion 8</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
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| APPENDIX A, I. Technical Criteria | <i>Criterion 8A</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, II. Financial Criteria | <i>Criterion 9</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, II. Financial Criteria | <i>Criterion 10</i> | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |
| APPENDIX A, III. Site and Byproduct Material Ownership | <i>Criterion 11A-F</i> | Ch4 Sec 3(b) | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| APPENDIX A, IV. Long- Term Site Surveillance | <i>Criterion 12</i> | Ch4 Sec 3(b) | NRC | YES | NO | NRC Compatibility excluded from State regulations to maintain NRC jurisdiction. |
| APPENDIX A, | Criterion 13 | Ch 4 Sec 3(a) | C | NO | | Incorporated by reference |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
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| V. <i>Hazardous Constituents</i> | | | | | | |
| | | | | | | |

10 CFR PART 150

Please Note: The bracket A [] A around a compatibility category designation means that the Section may have been adopted elsewhere in a State rules and it is not necessary to adopt it again.

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|------------------------|---------------------|----------------|------------------------|-------------------|--------------------|---|
| ' 150.1 | Purpose | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| ' 150.2 | Scope | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| ' 150.3 | Definitions | | | | | |
| | Act | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| | Agreement State | Ch1, Sec 5(f) | B | YES | NO | The Act is replaced with "Atomic Energy Act of 1954, as amended " |
| | Byproduct Material | Ch 1, Sec 5(s) | H&S | YES | YES | Only the definition related to the scope of authority that the State is seeking was included in the definition. Further clarification of the definition was added by referencing the definition in section 11(e)(2) of the AEA. |
| | Commission | Ch 1, Sec 5(x) | D | YES | NO | Added verbiage to make NRC an equivalent term |
| | Discrete source | Ch1 Sec 5(ao) | H&S | NO | | |
| | Foreign obligations | NA | NRC | YES | NO | Excluded from regulations because it is a reserved NRC function |
| | Government Agency | NA | D | YES | NO | Compatibility D Not included in State Regulations |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|-------------------------------|---------------------------------------|----------------------|-------------------------------|--------------------------|---------------------------|--|
| | Offshore Waters | NA | B | YES | YES | Term excluded from State regulations. Scope of material Wyoming is seeking to assume would not have transboundary effects that would effect offshore waters. Those rights reserved to NRC in offshore waters is still preserved through statute and rules. |
| | Person | Ch 1, Sec 5(cg) | C | YES | NO | The language matches WY Environmental Quality Act. Not a significant change |
| | Production facility | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| | Source material | Ch 1, Sec 5(dk) | A | YES | NO | Used 10 CFR Part 40 definition |
| | Special nuclear material | NA | A | YES | YES | This definition is not applicable to the scope of authority that Wyoming is seeking, therefore the definition is not included. |
| | State | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| | Utilization facility | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| | Uranium enrichment facility | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| ' 150.4 | Communications | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| ' 150.5 | Interpretations | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| ' 150.7 | Persons in offshore waters not exempt | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|-------------------------------|---|----------------------|-------------------------------|--------------------------|---------------------------|--|
| ' 150.8 | Information collection requirements: OMB approval | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| ' 150.10 | Persons exempt | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |
| ' 150.11 | Critical mass | NA | B | YES | YES | This definition is not applicable to the scope of authority that Wyoming is seeking, therefore the definition is not included. |
| ' 150.14 | Commission regulatory authority for physical protection | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |
| ' 150.15 | Persons not exempt | Chapter 4 Sec 3(e) | NRC | YES | NO | Specifically the rights described are reserved to the NRC |
| ' 150.15a | Continued Commission authority pertaining to byproduct material | Chapter 4 Sec 3(e) | NRC | YES | NO | Specifically the rights described are reserved to the NRC |
| ' 150.16 | Submission to Commission of nuclear material transfer reports | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |
| ' 150.17 | Submission to Commission of source material reports | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|------------------------|---|-----------------------|---|-------------------|--------------------|--|
| ' 150.17a | Compliance with requirements of US/ IAEA safeguards agreement | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |
| ' 150.19 | Submission to Commission of tritium reports | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |
| ' 150.20 ⁱⁱ | Recognition of Agreement State licenses | NA | C | YES | YES | The scope of material that is sought by the State will not require reciprocity |
| ' 150.21 | Transportation of special nuclear material by aircraft | NA | NRC | YES | NO | Rights Reserved to the NRC. Not incorporated into State regulations |
| ' 150.30 | Violations | NA | D | YES | NO | Compatibility D Not included in State Regulations |
| ' 150.31 | Requirements for Agreement State regulation of byproduct material | Chapter 4 Sec 3(C) | C- States with authority to regulate uranium mill activities 11e.(2) byproduct material D- States without authority | YES | NO | The Terms for Construction and Commencment of Construction were excluded since they are defined in Chapter 1 General Provisions Sec 5 (w)&(ab) |
| | | | | | | |

| NRC Regulation Section | Section Title | State Section | Compatibility Category | Difference Yes/No | Significant Yes/No | If Difference, Why or Why Not was a Comment Generated |
|---------------------------------------|--|--|---|------------------------------|-------------------------------|--|
| ' 150.32 | Funds for reclamation or maintenance of byproduct material | Chapter 6 Sec 4(b) & Sec 7(v)(A) | C- States with authority to regulate uranium mill activities (11e.(2) byproduct material) D- States without authority | YES | NO | Wording is different but the principle is the same. |
| ' 150.33 | Criminal penalties | NA | D | YES | NO | Compatibility D Not included in State Regulations |
