

UTAH WASTE MANAGEMENT AND RADIATION CONTROL BOARD

Executive Summary

Final Adoption of Amendments to Rules R313-15, R313-19, and R313-24

March 10, 2016

<p>What is the issue before the Board?</p>	<p>Final adoption of the proposed rule changes to R313-15, <i>Standards for Protection of Radiation</i>, R313-19, <i>Requirements of General Applicability to Licensing of Radioactive Material</i>, and R313-24, <i>Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements</i>. The proposed rule changes follow this Executive Summary.</p>
<p>What is the historical background or context for this issue?</p>	<p>On December 10, 2015, the Board approved filing with the Division of Administrative Rules for publication in the <i>Utah State Bulletin</i>, the proposed changes to R313-15, R313-19, and R313-24. The rule changes incorporate the federal decommissioning planning regulations promulgated by the U.S. Nuclear Regulatory Commission (NRC) on June 17, 2011. (76 FR 35512). The NRC issued the regulations to improve decommissioning planning in order to reduce the likelihood that any current operating facility will become a legacy site. The amended regulations require licensees to conduct their operations to minimize the introduction of residual radioactivity into the site, which includes the site’s subsurface soil and groundwater.</p> <p>Licensees also may be required to perform site surveys to determine whether residual radioactivity is present in subsurface areas and to keep records of these surveys with records important for decommissioning. The amended regulations require licensees to report additional details in their decommissioning cost estimate, eliminate the escrow account and line of credit as approved financial assurance mechanisms and modify other financial assurance requirements.</p> <p>Changes to Utah rules are required in order to maintain compatibility with NRC regulations as an Agreement State with the NRC. Under NRC’s requirements, an Agreement State has three years from the effective date of a federal regulation to adopt a corresponding rule.</p> <p>The proposed rule changes were published in the January 1, 2016 edition of the <i>Utah State Bulletin</i> (Bulletin), initiating the public comment period which ended on February 1, 2016. No comments were received regarding the proposed rule changes to R313-15, R313-19, and R313-24.</p>
<p>What is the governing statutory or regulatory citation?</p>	<p>The Board is authorized under Subsection 19-3-104(4)(b) to make rules to meet the requirements of federal law and maintain program primacy (Agreement State status) from the federal government (NRC). The proposed rulemaking also meets the Utah’s rulemaking procedures under 63G-3, Utah Administrative Rulemaking Act, Utah Code Annotated, and implementing rules of R15, Utah Admin. Code.</p>
<p>Is Board action required?</p>	<p>Yes. Board approval is needed for final adoption of the proposed rule changes and to set an effective date of March 15, 2016.</p>

What is the Division Director's recommendation?	The Director recommends the Board approve for final adoption, the proposed rule changes to R313-15, <i>Standards for Protection of Radiation</i> , R313-19, <i>Requirements of General Applicability to Licensing of Radioactive Material</i> , and R313-24, <i>Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements</i> , as published in the January 1, 2016 Bulletin and set an effective date of March 15, 2016.
Where can more information be obtained?	For questions or additional information, please contact Rusty Lundberg at (801) 536-4257 or rlundberg@utah.gov .

R313. Environmental Quality, Radiation Control.

R313-15. Standards for Protection Against Radiation.

R313-15-403. Criteria for License Termination Under Restricted Conditions.

A site will be considered acceptable for license termination under restricted conditions if:

(1) The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of Section R313-15-402 would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal; and

(2) The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that the total effective dose equivalent from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 mSv (0.025 rem) per year; and

(3) The licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are:

(a) Funds placed into an account segregated from the licensee's assets outside the licensee's administrative control, and in which the adequacy of the trust funds is to be assessed based on an assumed annual one percent real rate of return on investment ~~as described in Subsection R313-22-35(6)(a)~~;

~~(b) [Surety method, insurance, or other guarantee method as described in Subsection R313-22-35(6)(b)];~~

~~(c)]~~ A statement of intent in the case of Federal, State, or local Government licensees, as described in Subsection R313-22-35(6)(d); or

~~(c)(d)]~~ When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity; and

(4) The licensee has submitted a decommissioning plan or license termination plan to the Director indicating the licensee's intent to decommission in accordance with Subsection R313-22-36(4) and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the license termination plan or decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and incorporated, as appropriate, following analysis of that advice;

(a) Licensees proposing to decommission by restricting use of the site shall seek advice from such affected parties regarding the following matters concerning the proposed decommissioning:

(i) Whether provisions for institutional controls proposed by the licensee;

(A) Will provide reasonable assurance that the total effective dose equivalent from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 0.25 mSv (0.025 rem) total effective dose equivalent per year;

(B) Will be enforceable; and

(C) Will not impose undue burdens on the local community or other affected parties; and

(ii) Whether the licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site; and

(b) In seeking advice on the issues identified in Subsection R313-15-403(4)(a), the licensee shall provide for:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues; and

(5) Residual radioactivity at the site has been reduced so that if the institutional controls were no longer in effect, there is reasonable assurance that the total effective dose equivalent from residual radioactivity distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed either:

(a) one mSv (0.1 rem) per year; or

(b) five mSv (0.5 rem) per year provided the licensee:

(i) Demonstrates that further reductions in residual radioactivity necessary to comply with the one mSv (0.1 rem) per year value of Subsection R313-15-403(5)(a) are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm;

(ii) Makes provisions for durable institutional controls; and

(iii) Provides sufficient financial assurance to enable a responsible government entity or independent third party, including a governmental custodian of a site, both to carry out periodic rechecks of the site no less frequently than every five years to assure that the institutional controls remain in place as necessary to meet the criteria of Subsection R313-15-403(2) and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in Subsection R313-15-403(3).

R313-15-404. Alternate Criteria for License Termination.

(1) The Director may terminate a license using alternative criteria greater than the dose criterion of Section R313-15-402, and Subsections R313-15-403(2) and R313-15-403(4)(a)(i)(A), if the licensee:

(a) Provides assurance that public health and safety would continue to be protected, and that it is unlikely that the dose from all man-made sources combined, other than medical, would be more than the one mSv (0.1 rem) per year limit of Subsection R313-15-301(1)(a), by submitting an analysis of possible sources of exposure; and

(b) Has employed, to the extent practical, restrictions on site use according to the provisions of Section R313-15-403 in minimizing exposures at the site; and

(c) Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal; and

(d) Has submitted a decommissioning plan or license termination plan to the Director indicating the licensee's intent to decommission in accordance with Subsection R313-22-36(4), and specifying that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan or license termination plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and addressed, as appropriate, following analysis of that advice. In seeking such advice, the licensee shall provide for:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning; and

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues.

(e) Has provided sufficient financial assurance in the form of a trust fund to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site.

(2) The use of alternate criteria to terminate a license requires the approval of the Director after consideration of recommendations from the Division's staff, comments provided by federal, state and local governments, and any public comments submitted pursuant to Section R313-15-405.

R313-15-406. Minimization of Contamination.

(1) Applicants for licenses, other than renewals, shall describe in the application how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of waste.

(2) Licenses shall, to the extent practical, conduct operations to minimize the introduction of residual radioactivity into the site, including the subsurface, in accordance with the existing radiation protection requirements in Section R313-15-101 and radiological criteria for license termination in Sections R313-15-1401 through R313-15-1406.

R313-15-501. Surveys and Monitoring - General.

(1) Each licensee or registrant shall make, or cause to be made, surveys of areas, including the subsurface, that:

(a) ~~Are~~ May be necessary for the licensee or registrant to comply with Rule R313-15; and

(b) Are ~~necessary~~ reasonable under the circumstances to evaluate:

(i) The magnitude and the extent of radiation levels; and

(ii) Concentrations or quantities of residual radioactive material; and

(iii) The potential radiological hazards of the radiation levels and residual radioactivity detected.

(2) Notwithstanding R313-15-1103(1), records from surveys describing the location and amount of subsurface residual radioactivity identified at the site shall be kept with records important for decommissioning, and such records shall be retained in accordance with R313-22-35(7), as applicable.

~~(2)~~(3) The licensee or registrant shall ensure that instruments and equipment used for quantitative radiation measurements, for example, dose rate and effluent monitoring, are calibrated at intervals not to exceed 12 months for the radiation measured, except when a more frequent interval is specified in another applicable part of these rules or a license condition.

~~(3)~~(4) All personnel dosimeters, except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to any extremity, that require processing to determine the radiation dose and that are used by licensees and registrants to comply with Section R313-15-201, with other applicable provisions of these rules, or with conditions specified in a license or registration shall be processed and evaluated by a dosimetry processor:

(a) Holding current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology; and

(b) Approved in this accreditation process for the type of radiation or radiations included in the NVLAP program that most closely approximates the type of radiation or radiations for which the individual wearing the dosimeter is monitored.

~~(4)~~(5) The licensee or registrant shall ensure that adequate precautions are taken to prevent a deceptive exposure of an individual monitoring device.

KEY: radioactive materials, contamination, waste disposal, safety

Date of Enactment or Last Substantive Amendment: March 17, 2015

Notice of Continuation: December 3, 2012
Authorizing, and Implemented or Interpreted Law: 19-3-104; 19-3-108

R313. Environmental Quality, Radiation Control.

R313-19. Requirements of General Applicability to Licensing of Radioactive Material.

R313-19-34. Terms and Conditions of Licenses.

(1) Licenses issued pursuant to Rule R313-19 shall be subject to provisions of the Act, now or hereafter in effect, and to all rules, and orders of the Director.

(2)(a) Licenses issued or granted under Rules R313-21 and R313-22 and rights to possess or utilize radioactive material granted by a license issued pursuant to Rules R313-21 and R313-22 shall not be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of a license to a person unless the Director shall, after securing full information find that the transfer is in accordance with the provisions of the Act now or hereafter in effect, and to all rules, and orders of the Director, and shall give his consent in writing.

(b) An application for transfer of license shall include:

(i) The identity, technical and financial qualifications of the proposed transferee; and

(ii) Financial assurance for decommissioning information required by R313-22-35.

(3) Persons licensed by the Director pursuant to Rules R313-21 and R313-22 shall confine use and possession of the material licensed to the locations and purposes authorized in the license.

(4) Licensees shall notify the Director in writing and request termination of the license when the licensee decides to terminate activities involving materials authorized under the license.

(5) Licensees shall notify the Director in writing immediately following the filing of a voluntary or involuntary petition for bankruptcy under any Chapter of Title 11, Bankruptcy, of the United States Code by or against:

(a) the licensee;

(b) an entity, as that term is defined in 11 USC 101(15), controlling the licensee or listing the license or licensee as property of the estate; or

(c) an affiliate, as that term is defined in 11 USC 101(2), of the licensee.

(6) The notification specified in Subsection R313-19-34(5) shall indicate:

(a) the bankruptcy court in which the petition for bankruptcy was filed; and

(b) the date of the filing of the petition.

(7) Licensees required to submit emergency plans pursuant to Subsection R313-22-32(8) shall follow the emergency plan approved by the Director. The licensee may change the approved plan without the Director's approval only if the changes do not decrease the effectiveness of the plan. The licensee shall furnish the change to the Director and to affected off-site response organizations within six months after the change is made. Proposed changes that decrease, or potentially decrease, the effectiveness of the approved emergency plan may not be implemented without prior application to and prior approval by the Director.

(8) Each licensee preparing technetium-99m radiopharmaceuticals from molybdenum-99/technetium-99m generators or rubidium-82 from strontium-82/rubidium-82 generators shall test the generator eluates for molybdenum-99 breakthrough or strontium-82 and strontium-85 contamination, respectively, in accordance with Rule R313-32 (incorporating 10 CFR 35.204 by reference). The licensee shall record the results of each test and retain each record for three years after the record is made.

(9) Each portable gauge licensee shall use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee.

(10) (a) Authorization under Subsection R313-22-32(9) to produce Positron Emission Tomography (PET) radioactive drugs for noncommercial transfer to medical use licensees in its consortium does not relieve the licensee from complying with applicable FDA, other Federal, and State requirements governing radioactive drugs.

(b) A licensee authorized under Subsection R313-22-32(9) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall:

(i) Satisfy the labeling requirements in Subsection R313-22-75(9)(a)(iv) for each PET radioactive drug transport radiation shield and each syringe, vial, or other container used to hold a PET radioactive drug intended for noncommercial distribution to members of its consortium.

(ii) Possess and use instrumentation to measure the radioactivity of the PET radioactive drugs intended for noncommercial distribution to members of its consortium and meet the procedural, radioactivity measurement, instrument test, instrument check, and instrument adjustment requirements in Subsection R313-22-75(9)(c).

(c) A licensee that is a pharmacy authorized under Subsection R313-22-32(9) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall require that any individual that prepares PET radioactive drugs shall be:

(i) an authorized nuclear pharmacist that meets the requirements in Subsection R313-22-75(9)(b)(ii); or

(ii) an individual under the supervision of an authorized nuclear pharmacist as specified in Rule R313-32 (incorporating 10 CFR 35.27 by reference).

(d) A pharmacy authorized under Subsection R313-22-32(9) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium that allows an individual to work as an authorized nuclear pharmacist, shall meet the requirements of Subsection R313-22-75(9)(b)(v).

KEY: licenses, reciprocity, transportation, exemptions

Date of Enactment or Last Substantive Amendment: August 26, 2015

Notice of Continuation: September 23, 2011

Authorizing, and Implemented or Interpreted Law: 19-3-104; 19-3-108

R313. Environmental Quality, Radiation Control.

R313-24. Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements.

R313-24-1. Purpose and Authority.

(1) The purpose of this rule is to prescribe requirements for possession and use of source material in milling operations such as conventional milling, in-situ leaching, or heap-leaching. The rule includes requirements for the possession of byproduct material, as defined in Section R313-12-3 (see "byproduct material" definition (b)), from source material milling operations, as well as, possession and maintenance of a facility in standby mode. In addition, requirements are prescribed for the receipt of byproduct material from other persons for possession and disposal. The rule also prescribes requirements for receipt of byproduct material from other persons for possession and disposal incidental to the byproduct material generated by the licensee's source material milling operations.

(2) The rules set forth herein are adopted pursuant to the provisions of Subsections 19-3-104(4) and 19-3-104(8).

(3) The requirements of Rule R313-24 are in addition to, and not substitution for, the other applicable requirements of Title R313. In particular, the provisions of Rules R313-12, R313-15, R313-18, R313-19, R313-21, R313-22, and R313-70 apply to applicants and licensees subject to Rule R313-24.

(4) See R313-17-4 for special procedures for decisions associated with licenses for activity which results in the production or disposal of byproduct material.

R313-24-2. Scope.

(1) The requirements in Rule R313-24 apply to source material milling operations, byproduct material, and byproduct material disposal facilities.

R313-24-3. Environmental Analysis.

(1) Each new license application, renewal, or major amendment shall contain an environmental report describing the proposed action, a statement of its purposes, and the environment affected. The environmental report shall present a discussion of the following:

(a) An assessment of the radiological and nonradiological impacts to the public health from the activities to be conducted pursuant to the license or amendment;

(b) An assessment of any impact on waterways and groundwater resulting from the activities conducted pursuant to the license or amendment;

(c) Consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to the license or amendment; and

(d) Consideration of the long-term impacts including decommissioning, decontamination, and reclamation impacts, associated with activities to be conducted pursuant to the license or amendment.

(2) Commencement of construction prior to issuance of the license or amendment shall be grounds for denial of the license or amendment.

(3) The Director shall provide a written analysis of the environmental report which shall be available for public notice and comment pursuant to R313-17-2.

R313-24-4. Clarifications or Exceptions.

For the purposes of Rule R313-24, 10 CFR 40.2a through 40.4; 40.12; 40.20(a); 40.21; 40.26(a) through (c); 40.31(h); **the introductory paragraph of 40.36 and 40.36(a), (b), (d) and (f); 40.41(c); the introduction to 40.42(k) and 40.42(k)(3)(i); 40.46; 40.61(a) and (b); 40.65; and Appendix A to Part 40 (2015) are incorporated by reference with the following clarifications or exceptions:**

- (1) The exclusion and substitution of the following:
- (a) Exclude 10 CFR 40.26(c)(1) and replace with "(1) The provisions of Sections R313-12-51, R313-12-52, R313-12-53, R313-19-34, R313-19-50, R313-19-61, R313-24-1, Rules R313-14, R313-15, R313-18, and R313-24 (incorporating 10 CFR 40.2a, 40.3, 40.4, and 40.26 by reference)";
 - (b) In Appendix A to 10 CFR 40, exclude Criterion 5B(1) through 5H, Criterion 7A, Criterion 13, and replace the excluded Criterion with "Utah Administrative Code, R317-6, Ground Water Quality Protection"; and
 - (c) In Appendix A to 10 CFR 40, exclude Criterion 11A through 11F and Criterion 12;
- (2) The substitution of the following:
- (a) "10 CFR 40" for reference to "this part" as found throughout the incorporated text;
 - (b) "Director" for reference to "Commission" in the first and fourth references contained in 10 CFR 40.2a, in 10 CFR 40.3, 40.20(a), 40.26, 40.36(f), 40.41(c), 40.46(a), 40.61, and 40.65; and "Director" for reference to "NRC" in 10 CFR 40.36(b)
 - (c) "Rules R313-19, R313-21, or R313-22" for "Section 62 of the Act" as found in 10 CFR 40.12(a);
 - (d) "Rule R313-15-402" for reference to "10 CFR 20.1402 and "Rule 313-15-403" for reference to "10 CFR 20.1403" in 10 CFR 40.36(d);
 - (e) "Rule 313-15-1109" for reference to "10 CFR 20.2108" in 10 CFR 40.36(f);
 - (f) ~~(d)~~(f) "Rules R313-21 or R313-22" for reference to "the regulations in this part" in 10 CFR 40.41(c);
 - (g) ~~(e)~~(g) "Section R313-19-100" for reference to "part 71 of this chapter" as found in 10 CFR 40.41(c);
 - (h) ~~(f)~~(h) In 10 CFR 40.42(k)(3)(i), "R313-15-401 through R313-15-406" for reference to "10 CFR part 20, subpart E";
 - (i) ~~(g)~~(i) "source material milling" for reference to "uranium milling, in production of uranium hexafluoride, or in a uranium enrichment facility" as found in 10 CFR 40.65(a);
 - (j) ~~(h)~~(j) "Director" for reference to "appropriate NRC Regional Office shown in Appendix D to 10 CFR part 20 of this chapter, with copies to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555," as stated in 10 CFR 65(a)(1);
 - (k) ~~(i)~~(k) "require the licensee to" for reference to "require to" in 10 CFR 40.65(a)(1); and
 - (l) ~~(j)~~(l) In Appendix A to 10 CFR part 40, the following substitutions:
 - (i) "R313-12-3" for reference to "Sec. 20.1003 of this chapter" as found in 10 CFR 40.36(f) and in the first paragraph of the introduction to Appendix A;
 - (ii) "Utah Administrative Code, Rule R317-6, Ground Water Quality Protection" for ground water standards in "Environmental Protection Agency in 40 CFR part 192, subparts D and E" as found in the Introduction, paragraph 4; or "Environmental Protection Agency in 40 CFR part 192, subparts D and E (48 FR 45926; October 7, 1983)" as found in Criterion 5;
 - (iii) "Director as defined in Subsection 19-5-102(6)" for reference to "Commission" in the definition of "compliance period," in paragraph five of the introduction and in Criterion 5A(3);
 - (iv) "Director" for reference to "Commission" in the definition of "closure plan", in paragraph five of the introduction, and in Criteria 6(2), 6(4), 6(6), 6A(2), 6A(3), 9, and 10 of Appendix A;
 - (v) "license issued by the Director" for reference to "Commission license" in the definition of "licensed site," in the introduction to Appendix A;
 - (vi) "Director" for reference to "NRC" in Criterion 4D;
 - (vii) "representatives of the Director" for reference to "NRC staff" in Criterion 6(6);
 - (viii) "Director-approved" for reference to "Commission-approved" in Criterion 6A(1) and Criterion 9;

(ix) "Director" for reference to "appropriate NRC regional office as indicated in Criterion 8A" as found, Criterion 8, paragraph 2 or for reference to "appropriate NRC regional office as indicated in Appendix D to 10 CFR part 20 of this chapter, or the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555," as stated in Criterion 8A; and

(x) "Director" for reference to "the Commission or the State regulatory agency" in Criterion 9, paragraph 2.

KEY: environmental analysis, uranium mills, tailings, byproduct material

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