



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF RADIATION CONTROL
Rusty Lundberg
Director

Radiation Control Board
Peter A. Jenkins, Ph.D., CHP – *Chair*
Scott Bird – *Vice Chair*
Brady Bradford
Dick Codell, Ph.D.
Jerry Hurst, Tooele County Commissioner
Lindsey Christensen Nesbitt, Ph.D.
Ulrich Rassner, M.D.
Matt W. Rydalch
Amanda Smith – *Executive Director*

Rusty Lundberg, *Executive Secretary*

RADIATION CONTROL BOARD MEETING

August 12, 2014 – 1:00 p.m.

**Conference Room #1015, DEQ Board Room, First Floor
Multi Agency State Office Building (MASOB)
195 North 1950 West, Salt Lake City, Utah**

(One or more members of the Board may participate telephonically)
(Access Number: 1-877-820-7831 Passcode: 396230#)

FINAL AGENDA

- I. Welcome
- II. Approval of the **Minutes** from the June 10, 2014 Board Meeting
- III. Administrative Rulemaking
 - a. Proposed changes to **R313-17**, *Administrative Procedures*, **R313-24**, *Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements*, regarding public participation procedures for licensing uranium mills and radioactive byproduct material management per 42 U.S.C. §2021(o)(3)
 - i. Approve for rulemaking and public comment
 - b. Proposed changes to **R313-26**, *Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities*
 - i. Report from Board Subcommittee
 - ii. Approve for rulemaking and public comment
 - c. Proposed changes to **R313-70**, *Payments, Categories, and Types of Fees*,
 - i. Approve for rulemaking and public comment
 - d. Proposed changes to **R313-12-3**, *Definitions*, **R313-22-33**, *General Requirements for the Issuance of Specific Licenses*, and **R313-25-2**, *Definitions* (NRC RATS ID – 2011-2)
 - i. Approve for rulemaking and public comment
- IV. **Mammography Imaging Medical Physicist** – Request for approval of Kyle Siwek (UCA 19-3-103.5(f))

Radiation Control Board – Final Agenda

August 12, 2014

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V. Information Items

- a. Nuclear Regulatory Commission – activity update
- b. Uranium Mills
 - i. Energy Fuels Resources – White Mesa Mill – status update
- c. Low-level Radioactive Waste -- EnergySolutions
 - i. Ground Water Discharge Permit Renewal and Environmental Monitoring Plan Revisions – Public Comment
 - ii. Depleted Uranium Performance Assessment update
- d. Other Items
 - i. **Second Quarter 2014 Activities Report**

VI. Public Comment

VII. **Next Scheduled Board Meeting: Tuesday, September 9, 2014, 1:00 p.m.**

Multi Agency State Office Building, Board Conference Room #1015

195 North 1950 West

Salt Lake City, Utah

For those individuals needing special assistance in accordance with the Americans with Disabilities Act, please contact Dana Powers at the Utah Department of Environmental Quality, at 195 North 1950 West, Salt Lake City, UT 84116, Office of Human Resources at (801) 536-4412, TDD (801) 536-4414, or by email at: dpowers@utah.gov.



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Rusty Lundberg, *Executive Secretary*

**MINUTES
OF
THE UTAH RADIATION CONTROL
BOARD**

June 10, 2014

Department of Environmental Quality
Multi Agency State Office Building
Conference Room 1015, 195 North 1950 West, Salt Lake City, Utah

BOARD MEMBERS PRESENT

Scott Bird
Rusty Lundberg, Executive Secretary
Commissioner Jerry Hurst
Brady Bradford (via phone)
Ulrich Rassner, M.D.
Matt Rydalch
Peter Jenkins, CHP, Ph.D.
Richard Codell, Ph.D.
Amanda Smith, DEQ Executive Director

**DRC STAFF/OTHER DEO MEMBERS
PRESENT**

Craig Jones, DRC Section Manager
Phil Goble, DRC Manager
John Hultquist, DRC Manager
Laura Lockhart, Attorney General's Office
Connie Rauen, DRC Staff
Boyd Imai, DRC Staff
Loren Morten, DRC staff

**BOARD MEMBERS
ABSENT/EXCUSED**

Lindsey Christensen Nesbitt, Ph.D.

PUBLIC

Sean McCandless, EnergySolutions
Mark Ledoux, Energy Solutions
Janet Jenson, Jenson & Guelker

I. Welcome

Mr. Peter Jenkins, Chairman, called the meeting to order at 1:00 p.m. He welcomed the Board Members and the public.

II. Approval of the Minutes from the May 13, 2014 Board Meeting

Mr. Peter Jenkins, Chairman, asked if any of the Board members had any corrections to the minutes. None were requested.

MOTION MADE BY COMMISSIONER MR. JERRY HURST TO APPROVE THE MINUTES FROM THE MAY 13, 2014 BOARD MEETING.

SECONDED BY DR. ULRICH RASSNER.

MOTION CARRIED AND PASSED UNANIMOUSLY.

III. Administrative Rulemaking

a. Proposed changes to R313-26, Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities – Possible evaluation by Board Subcommittee.

i. Status Report from Board Subcommittee – Mr. Peter Jenkins updated the Board on the Subcommittee's meeting, discussions and proposals made, he also stated that this topic was discussed at the working lunch in depth. Although, it is still a work in progress, the Subcommittee will share their recommendations to the Board at the meeting in August.

b. Ms. Laura Lockhart updated the Board and reviewed comments received on the preliminary draft proposed changes to R313-17, Administrative Procedures, R313-24, Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements, regarding public participation procedures for licensing Uranium mills and radioactive byproduct material per 42 U.S.C. §2021(o)(3). She also informed the Board on the opportunity to cross-examine was used in the past during trial type procedures, but was not considered for licensing actions. She addressed the comments and concerns from EnergySolutions and the public on the length of time it takes to issue permits. She stated that she will have something for the Board to consider to send out for rulemaking in August. Mr. Peter Jenkins, Chairman, added that the topic was also discussed in depth at the Working Lunch Meeting.

c. Mr. Craig Jones reviewed and gave a presentation on the recent changes to 10 CFR Part 37, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material, by the Nuclear Regulatory Commission (NRC). He made use of slides that were prepared by the NRC for a training program they conducted. (Slides included in June Board Meeting packet)

IV. Information Items

a. Nuclear Regulatory Commission – activity update – Mr. Rusty Lundberg informed the Board of the NRC activities and changes to Part 61 rulemaking. He stated the NRC staff provided their proposal to make changes to Part 61 and they received a requirements memo from the NRC Commissioner's. The staff is reviewing the requirements memo and should have it completed by the end of the year. The staff also anticipates seeing a rulemaking proposal by February 2015.

b. Uranium Mills

i. Energy Fuels Resources – White Mesa Mill – status update by Mr. John Hultquist on the license renewal.

ii. Uranium One – Shootaring Canyon – status update provided by Mr. John Hultquist. He reported that the licensee sent the DRC a letter in March requesting an extension to either execute a transfer control of the license. Or submit a License Renewal Application or go into decommissioning. The DRC responded in an April 2014 letter granting the extension request and, they have until August to notify us of a transfer of Control or October to renew or begin decommissioning.

c. Low-level Radioactive Waste

i. Depleted Uranium Performance Assessment update – Mr. Rusty Lundberg gave the Board an update. A second round of interrogatories have been sent to Energy Solutions and these are online for those who are interested in viewing them. A revision to the performance assessment for the Depleted Uranium was received and is being reviewed by consultants and technical contractors. Feedback is anticipated by the end of August to get comments from the public, and a decision is anticipated by October 2014.

d. Other Items

V. Public Comment

Adjourned 1:35:30 PM

Next Scheduled Board Meeting: Tuesday, August 12, 2014, 1:00 p.m.

Multi Agency State Office Building, Board Conference Room #1015

195 North 1950 West, Salt Lake City, Utah 84116

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**MINUTES
OF
THE UTAH RADIATION CONTROL BOARD
WORKING LUNCH MEETING**

June 10, 2014

Department of Environmental Quality
Multi Agency State Office Building
Red Rocks Conference Room 3132, 195 North 1950 West, Salt Lake City, Utah

BOARD MEMBERS PRESENT

Scott Bird
Rusty Lundberg, Executive Secretary
Commissioner Jerry Hurst
Brady Bradford (via phone)
Ulrich Rassner, M.D.
Matt Rydalch
Peter Jenkins, CHP, Ph.D.
Richard Codell, Ph.D.

**BOARD MEMBERS
ABSENT/EXCUSED**

Lindsey Christensen Nesbitt, Ph.D.
Amanda Smith, DEQ Executive Director

**DRC STAFF/OTHER DEO MEMBERS
PRESENT**

Craig Jones, DRC Manager
Phil Goble, DRC Manager
John Hultquist, DRC Manager
Laura Lockhart, Attorney General's Office
Loren Morton, DRC staff

PUBLIC

Sean McCandless, EnergySolutions
Janet Jenson, Jenson & Guelker

Welcome

Mr. Peter Jenkins, Chairman, called the meeting to order at 11:00 a.m. He welcomed the Board Members and the public.

Administrative Rulemaking

- a. Status Report from Board Subcommittee regarding proposed changes to R313-26, *Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities*

Dr. Peter Jenkins, Chairman gave brief report on the sub-committee's meetings and suggestions in response to the comments received during the informal scoping period. The subcommittee anticipated discussing the revised rule for R313-26 in the meeting, but it was still working on the proper wording and receiving a legal approval. He mentioned some of the issues that were addressed relate to the change in the statute. The first issue was removal of the wording "waste of international origin." Second, the sub-committee also focused on distinguishing the responsibility of both generators and shippers, since they are different entities. Third, the new condition put in statute by the Legislature requires that a generator site access permittee grant access to the DRC to their facility. The sub-committee was determining in rule what would be done during a site visit of those facilities.

- b. Discussion – Comments received on the preliminary draft proposed changes to R313-17, *Administrative Procedures*, R313-24, *Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements*, regarding public participation procedures for licensing uranium mills and radioactive byproduct material management per 42 U.S.C. §2021(o)(3).

Ms. Laura Lockhart updated the Board and reviewed comments received on the preliminary draft proposed changes to R313-17, *Administrative Procedures*, R313-24, *Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements*, regarding public participation procedures for licensing Uranium mills and radioactive byproduct material per 42 U.S.C. §2021(o)(3). Comments were received from EnergySolutions and Uranium Watch. Ms. Lockhart discussed some of the comments received. She also explained to the Board that the opportunity to cross-examine was used in the past during trial type procedures, but had not been considered for licensing actions. Mr. Rusty Lundberg added that representatives of the EnergySolutions and Uranium Watch were in attendance via telephone or in person. There was a discussion between Dr. Ulrich Rassner, Ms. Laura Lockhart, Mr. Rusty Lundberg and other Board Members about the period of time it takes staff members to review and respond to comments. Rusty Lundberg stated the DRC is continually trying to find a balance between the time allowed and the reasonable time needed.

- c. Briefing – Recent changes to 10 CFR Part 37, *Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material*, by the Nuclear Regulatory Commission (NRC)

Mr. Craig Jones reviewed and gave a presentation on the recent changes to 10 CFR Part 37, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material (i.e. Increased Controls), by the Nuclear Regulatory Commission (NRC) and what was required by the State of Utah. It is required by the NRC that the State of Utah adopt these changes by March 19, 2016. However, Mr. Jones explained that the DRC plans to present proposed rulemaking to the Board later in 2014 to adopt the changes of 10 CFR 37.

UTAH RADIATION CONTROL BOARD

August 12, 2014

PROPOSED RULE CHANGES

UAC R313-17, Administrative Procedures UAC R313-24, Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements

INTRODUCTION

The federal Atomic Energy Act requires Agreements States to include an opportunity to cross-examination as part of certain licensing actions related to 11e.(2) byproduct material. (42 USC §2021(o)(3)(A)(ii)) In the past, DRC met this requirement through the trial-type procedures that were available when a board heard a challenge to the agency's decision. However, when the appeal procedure was changed to a record review in 2012 (S.B. 11, 2012 General Session), the Division's governing law no longer gave any person a right to cross-examination.

The purpose of this proposed rulemaking is to ensure that the Division's rules again meet the requirement under 42 USC § 2021(o)(3)(A)(ii). The Division has consulted with the Nuclear Regulatory Commission (NRC) in creating this rule. A Board subcommittee has also considered the initial proposal and approved it for scoping. As a result of the scoping process as well as some internal review, some changes have been made. The most significant change is that question and answer hearings (the more informal version of an opportunity for cross-examination that the Division prefers) will not be scheduled automatically, but may be requested. It is likely that some license and permit amendments will not generate significant public interest, so this change will save agency resources. The proposed rule also clarified that the term "license" includes ground water protection permits incorporated in licenses.

The proposed rulemaking includes the procedural provisions in R313-17 and also a reference in R313-24. Since the Department has authority to make rules governing procedures on appeal, the Division will also request a separate procedural rule by the Department, in R305-7-607, to ensure that concerns about compliance with the new procedural requirement will be considered during a license or permit appeal.

While this rulemaking process is underway, the Division has committed to NRC and to the public that it will give interested persons an opportunity for a question and answer hearing consistent with the proposed rule even though it is not currently required by Utah law.

RULEMAKING PROCESS

If approved by the Board, this proposed rule will be published in the September 1, 2014 issue of the *Utah State Bulletin*, and comments will be accepted through October 1, 2014. The Division will bring a recommended final action to the Board for its review during the October or November Board meeting.

DIVISION RECOMMENDATION

The Division of Radiation Control recommends that the Board approve the proposed rule and instruct the Division to initiate the rulemaking process and a 30-day public comment period by filing the proposed rule changes with the Division of Administrative Rules for publication in the *Utah State Bulletin*, and in turn, notifying interested stakeholders and the public of the proposed changes.

**RULES FOR QUESTION AND ANSWER HEARINGS FOR
SPECIFIED BYPRODUCT LICENSE ACTIONS**

August 4, 2014

R313. Environmental Quality, Radiation Control.

R313-17. Administrative Procedures.

R313-17-4. Special Procedures for Decisions Associated with Licenses for Uranium Mills and Disposal of Byproduct Material.

(1) Definitions. For purposes of this rule:

- (a) "Byproduct material" has the same meaning as defined in 42 U.S.C. § 2014(e) ;
- (b) "License" means a radioactive materials license for a uranium mill or disposal of byproduct material, including any ground water discharge permit incorporated in a license; and
- (c) "Question and answer hearing" means the informal hearing described in paragraphs (3) through (5) held for the purpose of responding to questions from the public.

(2) Scope. This rule R313-17-4 applies only to licensing activities that meet both of the following criteria:

- (a) they are licensing activities described in R313-17-2(a)(i)(A) through (I); and
- (b) they are for licenses or license amendments for uranium mills and disposal of byproduct materials.

(3) Opportunity for Question and Answer Hearing Prior to Director's Decision.

- (a) For licensing actions that are subject to the scope of this rule, the division may, at its discretion, schedule a question and answer at the time it proposes the action.
- (b) If the division does not choose to schedule a question and answer session at the time it proposes a licensing action, it shall provide notice to the public of an opportunity to request a question and answer session, and it shall schedule and hold a session if there is a request from a member of the public.
- (c) Notice of a hearing or an opportunity to request a hearing under this rule shall be made as provided in R313-17-3(5). Member of the public shall be given at least ten days to request a hearing.
- (d) The division may combine the question and answer hearing with a licensing hearing held for the purpose of taking public comment on a proposed licensing action.

(4) Procedures Prior to Question and Answer Hearing.

- (a) The Division shall provide a notice of the question and answer hearing at least 30 days before the hearing. The notice shall also summarize the applicable procedures, including the obligation to provide questions in advance of the hearing.
- (b) Any person who proposes to ask questions during the question and answer hearing shall submit the questions to the division. Questions must be received by the division by the deadline specified in the public notice, which shall be no fewer than 15 days after the notice of the question and answer hearing is posted. If a question relies on information that is not included in the licensing record, that information shall be submitted with the questions. The relevance of and the relevant portions of any supporting materials shall be described with reasonable specificity. Information submitted in accordance with this paragraph will become part of the record.
- (c) If the Director determines that any of the questions submitted will not be answered during the question and answer hearing, as provided in paragraph (5)(f), the director shall notify the person who submitted the questions prior to the hearing. Notification shall include a statement about the director's reasons for the determination.

(5) Procedures for Question and Answer Hearing.

- (a) The question and answer hearing shall ordinarily be held in the Department of Environmental Quality offices. Unless the question and answer hearing is held in a place near the proposed facility, the division shall provide an opportunity for the public to participate by telephone or other electronic means.
- (b) The question and answer hearing session will not ordinarily be scheduled for longer than three hours. The division may allocate time to those who have submitted questions after considering the number and nature of the questions submitted.
- (c) A hearing officer shall manage the question and answer hearing. Representatives of the licensee and division staff shall attend the hearing.
- (d) The question and answer hearing shall be recorded and transcribed. Alternatively, the division may elect to have a court reporter record and transcribe the

- hearing.
- (e) The Director shall determine whether the initial and follow-up question will be answered by the applicant, by division staff, or by both. Notwithstanding the Director's decision, the applicant may choose to respond to any question. After the response to a question, the person who submitted the question shall be allowed to follow up with additional questions based on the response provided.
 - (f) Appropriate questions are those that seek specific factual information about the license application, or about other documents created during the licensing process. The following kinds of questions do not require a response during a question and answer session:
 - (i) Questions that are not relevant to the licensing action;
 - (ii) Questions that are based on information that is not in the record;
 - (iii) Questions that are vague;
 - (iv) Questions that require speculation;
 - (v) Questions that seek legal conclusions;
 - (vi) Questions that have been previously answered;
 - (vii) Questions that are more appropriately characterized as comments; and
 - (viii) Questions that would not have to be answered during a trial-type hearing.
 - (g) Either the agency or the applicant may elect to answer a question even if it is a question that does not require a response under paragraph (f). No waiver will result from answering a question that does not require a response.
 - (h) Questions requesting information that is clear in the record may be answered by referring the questioner to the record.
 - (i) In the event that a questioner or the applicant disagrees with the Director's determinations under paragraphs (4) (c), (5) (b), or (5) (e), it may request a determination by the hearing officer. If the hearing officer disagrees with the Director's determination, the division or, as appropriate, the applicant may then:
 - (i) comply with the hearing officer's determination during the question and answer hearing;

(ii) comply with the hearing officer's determination by responding to the question in writing no fewer than 10 days before the end of the comment period; or

(iii) notify the questioner or applicant that it contests the determination, and provide information to the questioner about the procedures available to it under paragraph (5)(j).

(j) If a decision of the hearing officer is contested as described in paragraph (5)(i)(iii), the person who asked the question may challenge that failure to comply with the hearing officer's decision on appeal. If the hearing officer's determination is upheld on appeal, the record on appeal shall be supplemented as described in paragraph (6) and R305-7-607.

(6) **Formal Questioning During Appeal.**

If the procedures in paragraphs (2) through (5) are not used before the director's final determination, an opportunity for questioning shall be provided on appeal as described in R305-7-607.

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 of byproduct material.

(Note: This is in R305 because only the Department has authority to make rules governing what is in a record under 19-1-301.5(8)(c)(vi))

R305-7-607. Matters Governed by the Radiation Control Act, Title 19, Chapter 3, but not Including Section 19-3-109.

- (1) Paragraph (2) of this[This] subsection R305-7-607 applies to all matters governed by the Radiation Control Act, Title 19, Chapter 3, but not including Section 19-3-109.
- (2) Definitions.
"Director" means the Director of the Division of Radiation Control.
- (3) This paragraph (3) applies to proceedings to which R313-17-4(6) applies.
 - (a) A hearing shall be conducted by the ALJ for the limited purposes of:
 - (i) allowing the petitioner to ask questions; and
 - (ii) allowing follow-up questions of the witnesses or other witnesses, including those representing the petitioner, by any party.
 - (b) Questioning under this paragraph shall be consistent with the standards specified R313-17-4(f) and (h).
 - (c) The ALJ shall determine whether the petitioner's questions shall be answered by the division staff, by the applicant, or by both.
 - (d) The procedures in R305-7, Part 3 shall govern the hearing as appropriate for the limited scope of the hearing.
 - (e) The transcript of the hearing will be part of the record on appeal, as authorized in 19-1-301.5(8)(c)(vi).

UTAH RADIATION CONTROL BOARD
August 12, 2014

PROPOSED RULE CHANGES

**R313-26, Generator Site Access Permit Requirements
for Accessing Utah Radioactive Waste Disposal Facilities**

INTRODUCTION

As a result of the passage of H.B. 124, Radiation Control Amendments, during the 2013 General Session of the Utah Legislature, an amendment was enacted that states the Director of the Division of Radiation Control (DRC) may not grant a generator site access permit to a generator or broker for access to a radioactive disposal site in Utah unless the generator or broker agrees to grant the division reasonable access to its facilities for the verification of Utah requirements regarding radioactive waste classification.

RULEMAKING PROCESS

In consideration of this new statutory provision, the Board, during its November, 2013 meeting, discussed and developed proposed preliminary rule changes and determined to receive public comment on the preliminary changes. Accordingly, an informal public comment period to receive comment on the proposed preliminary rule changes to R313-26, *Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities* was held from March 12, 2014 to March 28, 2014. Comments were received from four entities. The comments were discussed in the April 8, 2014 Board meeting. The Board decided to form a subcommittee to address the comments. The subcommittee has prepared a revised proposed rule and will present this to the Board during the August 12, 2014 Board meeting.

DIVISION RECOMMENDATION

The Division of Radiation Control recommends that the Board approve the subcommittee's recommended language and initiate the rulemaking process by filing the proposed rule changes to R313-26, *Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities*, with the Division of Administrative Rules for publication in the *Utah State Bulletin*, and in turn, notifying interested stakeholders and the public of the proposed changes and initiating a 30-day public comment period.

R313. Environmental Quality, Radiation Control.

R313-26. Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities.

R313-26-1. Purpose and Authority.

(1) The purpose of this rule is to prescribe the requirements for the issuance of permits to generators for accessing a land disposal facility located within the State and requirements for shippers.

(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 R313-26 are in addition to, and not in substitution for, other applicable requirements of these rules.

R313-26-2. Definitions.

As used in Rule R313-26, the following definitions apply:

"Applicant" means a Waste Generator or Waste Broker who applies for a Generator Site Access Permit.

"Disposal" means the isolation of wastes from the biosphere by placing them in a land disposal facility.

"Generator Site Access Permit" means an authorization to deliver radioactive wastes to a land disposal facility located within the State of Utah.

"Land disposal facility" has the same meaning as that given in Section R313-25-2.

"Manifest" means the document, as defined in Appendix G of 10 CFR 20.1001 to 20.2402 (2006), used for identifying the quantity, composition, origin, and destination of radioactive waste during its transport to a disposal facility. [

~~_____ "Packager" means Waste Processor, Waste Collector or Waste Generator as defined in Section R313-26-2.]~~

"Radioactive waste" means any material that contains radioactivity or is radioactively contaminated and is intended for ultimate disposal at a licensed land disposal facility in Utah.

"Shipper" means ~~[the person]~~ a Waste Generator, Waste Collector, Waste Processor, or other Waste Broker who transports or offers radioactive waste for transport[ation] for disposal at[, typically consigning this type of waste to] a land disposal facility in Utah.

"Waste Broker" means a person who arranges for transportation of the radioactive waste for a Waste Generator, who collects or consolidates shipments of radioactive waste for a Waste Generator; or who processes radioactive waste in some manner for a waste generator, and who is not a carrier whose sole function is to transport the radioactive waste. The term includes a Waste Collector or a Waste Processor.

"Waste Collector," "Waste Generator," and "Waste Processor" ~~[has]~~have the meanings as defined in Appendix G of 10 CFR 20.1001 to 20.2402 (~~[2006]~~2013).

R313-26-3. Generator Site Access Permits.

(1) A Waste Generator or Waste Broker~~[, Waste Collector, or Waste Processor]~~ shall obtain a Generator Site Access Permit from the Director before transferring radioactive waste to a land disposal facility in Utah.

(~~[1]~~2) A Generator Site Access Permit application~~[s]~~ shall be filed on a form prescribed by the Director.

(~~[2]~~3) An ~~[A]~~application~~[s]~~ shall be received by the Director at least 30 days prior to the date the first shipment under the requested Generator Site Access Permit is proposed to begin transport~~[any shipments being delivered]~~ to a land disposal facility in Utah.

(~~[3]~~4) Each Generator Site Access Permit application shall include a certification to the Director that ~~the~~ ~~[shipper]~~applicant shall comply with all applicable State or Federal laws, administrative rules and regulations, licenses, or license conditions of the land disposal facility regarding the packaging, transportation, storage, disposal and delivery of radioactive wastes.

(5) As a condition of receiving a Generator Site Access permit, an applicant shall, in its Generator Site Access Permit application, grant the division reasonable access to its facilities for the purpose of inspecting and verifying the applicant's waste packaging, waste classification and waste management activities. The purpose of the division's evaluation is to determine whether waste and waste packaging is being managed and prepared in a manner that gives the division reasonable assurance that disposal of waste from the facility at a Utah land disposal facility would be in compliance with Utah law, including the requirement in R313-26-4(7) that a radioactive waste package or shipment that arrives at a Utah land disposal facility for disposal may not exceed the Class A low-level radioactive waste limits set in UAC R313-15-1009 or other radioactive waste prohibited from being disposed under 19-3-103.7. An applicant's grant of reasonable access will not be interpreted to allow division representatives to evaluate a facility for other purposes.

(~~[4]~~6) Generator Site Access Permit fees shall be assessed annually by the Director based on the following ~~[classifications]~~categories:

(a) Waste Generators shipping ~~[more than 1000 cubic feet of]~~ radioactive waste ~~[annually]~~ to a land disposal facility in Utah.

(b) ~~Waste Generators shipping 1000 cubic feet or less of radioactive waste annually to a land disposal facility in Utah.~~
~~(c)~~ Waste Collectors, [or] Waste Processors, or other Waste Brokers shipping radioactive waste to a land disposal facility in Utah.

(~~5~~) 7) A Generator Site Access Permit[s] shall be valid for a maximum of one year from the date of issuance. The Director may modify individual Generator Site Access Permit terms [and prorate the annual fees accordingly] for administrative purposes.

(~~6~~) 8) A Generator Site Access Permit[s] may be renewed by filing a [new] renewal application with the Director. To ensure timely renewal, a Waste [g]Generator[s] [and] or Waste [b]Broker[s] shall submit an application[s,] for Generator Site Access Permit renewal[.] a minimum of 30 days prior to the expiration date of [their] a Generator Site Access Permit.

(~~7~~) 9) Generator Site Access Permit fees are not refundable.

(~~8~~) 10) Transfer of a Generator Site Access Permit shall be approved in advance by the Director.

(~~9~~) 11) The number of Generator Site Access Permits required [by each generator] for a Waste Generator or Waste Broker with more than one facility shall be determined by the following requirements:

(a) A Waste Generator[s] or Waste Broker who owns multiple facilities within the same state may apply for one Generator Site Access Permit, provided the same contact person within the generator's company shall be responsible for responding to the Director for matters pertaining to the waste shipments.

(b) Facilities which are owned by the same generator and located in different states shall obtain separate Generator Site Access Permits.

(c) A Person[s] who is a Waste Generator [~~both generate~~] and [~~are~~] is also [either] a Waste [Processor] Broker [or Waste Collector] shall obtain separate Generator Site Access Permits for each category.

R313-26-4. Shipper's Requirements.

(1) ~~The~~ (a) Prior to transport, a shipper shall provide to [on demand] the Director a copy of the Nuclear Regulatory Commission's "Uniform Low Level Radioactive Waste Manifest" for each shipment[s] consigned for disposal within Utah. The waste manifest shall be sent by the shipper via e-mail to an address as directed by the division at the same time it is sent via e-mail to the disposal facility in Utah. All waste manifests sent via email shall be submitted to the Director in searchable PDF electronic format.

(b) The Director or the Director's delegee may, by telephone, waive the requirement in paragraph (a) for submission of manifests

in searchable PDF electronic format for a shipper who hand enters information on the manifests.

(2) The appropriate Generator Site Access Permit number(s) shall be documented on the manifest.

(3) ~~[Waste Generators, Waste Processors and Waste Collectors]~~ A shipper shall ensure that all Generator Site Access Permits are current prior to shipment of waste to a land disposal facility located in the state of Utah, and that the waste will arrive at the land disposal facility prior to the expiration date of the applicable Generator Site Access Permits.

(4) A shipper shall ensure that each radioactive waste package or shipment that arrives at a Utah land disposal facility for disposal:

(a) does not exceed the Class A low-level radioactive waste limits set in UAC R313-15-1009 or other limitations in 19-3-103.7, and

(b) is compliant with the disposal facility's currently approved Radioactive Material License, as applicable.

(5) A ~~[Waste Collector, Waste Processor or Waste Generator]~~ Shipper shall ensure ~~[all-]~~ that each container of radioactive waste ~~[contained within a shipment]~~ shipped for disposal at a land disposal facility in the state is traceable to the original generators and states, regardless of whether the waste is shipped directly from the point of generation to the disposal facility.

(6) Waste Processors, Waste Collectors, and other Waste Brokers shall provide information that specifies the waste's originating generator name(s), the Low-Level Radioactive Waste compact affiliation, if applicable, and the state or nation of origin. The information may be provided in a summary spreadsheet or on the Low Level Waste Manifest (542 Form), in a format prescribed by the Director.

~~(5)~~ (7) The shipper shall ensure ~~[waste-]~~ that all radioactive waste ~~[material-]~~ that arrives at a Utah land disposal facility for disposal is contained securely. To be contained securely, a package or container of radioactive waste shall meet the requirements specified in R313-19-100 (5) (a) (i) (A), and shall contain waste such that, under conditions normally incident to transportation, there is no waste material outside of the container, and the physical and containment integrity has not been compromised. ~~[where no release of material can occur under conditions normally incident to transportation and shall utilize waste container(s)/package(s) where containment integrity has not been compromised.]~~

(8) The shipper shall comply with all applicable requirements of R313-19-100.

R313-26-5. Land Disposal Facility Licensee Requirements.

The land disposal facility licensee shall ensure that Waste Generators, Waste Collectors and Waste Processors have a current, unencumbered Generator Site Access Permit prior to accepting a Waste Generator's, Waste Collector's or Waste Processor's waste.

R313-26-6. Enforcement.

~~[Generator Site Access Permittees shall be subject to the provisions of Rule R313-14 for violations of federal regulations, state rules or requirements in the current land disposal facility operating license regarding radioactive waste packaging, transportation, labeling, notification, classification, marking, manifesting or description.~~

~~_____]~~The requirements of this Rule are enforceable as provided in 19-3-109, 19-3-110 and R313-14. Penalties may include termination of a Generator Site Access Permit.

KEY: radioactive waste generator permit

Date of Enactment or Last Substantive Amendment: September 22, 2011

Notice of Continuation: April 6, 2011

Authorizing, and Implemented or Interpreted Law: 19-3-106.4

BOARD ACTION ITEM

RULEMAKING ISSUE

R313-70, "Payments, Categories and Types of Fees"

Craig Jones will present information concerning substantive changes to the rules that address payments to the Division, license categories, and types of fees. The Board packet includes a copy of the Notice of Proposed Rule Amendment and a copy of the proposed changes. Text to be added is underlined, while text to be deleted is bracketed and interlined. The proposed modifications involve substantive changes to the rules and they are required to be published for a 30-day minimum public comment.

Recommendation

The Director recommends that the Board:

- 1. approve the proposed changes to R313-70,**
- 2. direct staff to file the changes for rulemaking, and**
- 3. direct staff to give notice to the public of a 30-day comment period.**

R313. Environmental Quality, Radiation Control.

R313-70. Payments, Categories and Types of Fees.

R313-70-1. Purpose and Authority.

(1) The purpose of this rule is to prescribe the requirements to assess fees of registrants and licensees possessing sources of radiation.

(2) The rules set forth herein are adopted pursuant to the provisions of Subsection 19-3-104(6).

R313-70-2. Scope.

The requirements of Rule R313-70 apply to persons who receive, possess, or use sources of radiation provided: however, that nothing in these rules shall apply to the extent a person is subject to regulation by the U.S. Nuclear Regulatory Commission.

R313-70-3. Communications.

Communications concerning [~~the rules in~~] Rule R313-70 should be addressed to the Director, and may be sent to the Division of Radiation Control, Department of Environmental Quality. Communications may be delivered in person at the Division of Radiation Control offices.

R313-70-5. Payment of Fees.

(1) New Application Fee: Applications for radiation machine registration or radioactive material licensing for which a fee is prescribed, shall be accompanied by a remittance in the full amount of the fee. Applications will not be accepted for filing or processing prior to payment of the full amount specified. Applications for which no remittance is received will be returned to the applicant. Application fees will be charged irrespective of the Director's disposition of the application or a withdrawal of the application.

(2) Annual Fee: Persons and individuals who are subject to licensing or registration of radioactive material or radiation machine registration with the Department of Environmental Quality under provisions of the Utah Radiation Control Rules, are assessed an annual fee in accordance with categories of Sections R313-70-7 and R313-70-8.

The appropriate fee shall be filed annually with the Director, by the due date the Director specifies [~~July 30~~] for registrants or by the anniversary date for licensees. The account of a licensee or registrant that is delinquent on or after 61 days may be transferred to the Office of State Debt Collection in accordance with Section R21-1-5. [~~Fees for radiation machine registration will be considered late if not received annually by the last day of August. Licensees may be assessed late fees if license fees are not received within 30 days after the license anniversary date. Late fees may also be assessed for successive 30 day periods during which the annual fee or registration fee remains unpaid.~~]

(3) Inspection Fee: Persons and entities who, under provisions of the Utah Radiation Control Rules, are subject to radiation machine registration with the Department of Environmental Quality are assessed an inspection fee in accordance with Section R313-70-8. Fees for inspection of a radiation machine are due within 30 days of receipt of an invoice from the Agency. [~~Registrants may be assessed late fees if inspection fees are not received in a timely manner.~~] The

inspection account of a registrant that is delinquent on or after 61 days may be transferred to the Office of State Debt Collection in accordance with Section R21-1-5.

(4) Failure to pay the prescribed fee: the Director will not process applications and may suspend or revoke licenses or registrations or may issue an order with respect to the activities as the Director determines to be appropriate or necessary in order to carry out the provisions of this part of Rule R313-70, and of the Act.

(a) General license certificates of registration and new specific licenses issued pursuant to the provisions in Rules R313-21 or R313-22, will be valid for a period of five years unless failure to submit appropriate fee occurs. Specific license renewals issued pursuant to the provisions in Rule R313-22 may be valid for a period of ~~ten[s]~~ years or less in accordance with Subsections R313-22-34(1)(b) and (1)(c). Machine registrations will be valid for one year during the schedule established by the Director in accordance with~~[interval outlined in]~~ Section R313-16-230. Failure to submit appropriate fees will render the license, certificate or registration invalid, at which time a new application with appropriate fees shall be submitted.

(b) Renewal applications shall be filed in a timely manner in accordance with Sections R313-22-37 or R313-16-230. The radioactive material license will expire on the date specified on the license.

A general license certificate of registration will expire on the date specified on the certificate of registration. A radiation [M]machine registration will expire as outlined in Section R313-16-230. The Director may renew a[A]n expired license if the licensee provides information that explains why the renewal application was not submitted pursuant to the provisions in Subsection R313-22-36(1) and other information the Director may request to determine that issuance of the license will not be inimical to the health and safety of the public. [cannot be renewed, rather the licensee will be required to submit an application for a new license and submit the appropriate application and new license fee.]

(5) Method of Payment: Fees shall be made payable to: Division of Radiation Control, Department of Environmental Quality.

R313-70-7. License Categories and Types of Fees for Radioactive Materials Licenses.

Fees shall be established in accordance with the Legislative Appropriations Act. Copies of established fee schedules may be obtained from the Director.

TABLE

LICENSE CATEGORY	TYPE OF FEE
(1) Special Nuclear Material	
(a) Licenses for possession and use of special nuclear material in sealed	New License or Renewal Annual Fee

sources contained in devices used in industrial measuring systems, including x-ray fluorescence analyzers and neutron generators.

(b) Licenses for possession and use of less than 15 g special nuclear material in unsealed form for research and development.

New License or Renewal
Annual Fee

(c) All other special nuclear material licenses.

New License or Renewal
Annual Fee

(d) Special nuclear material to be used as calibration and reference sources.

New License or Renewal
Annual Fee

(2) Source Material.

(a) Licenses for concentrations of uranium from other areas like copper or phosphates for the production of moist, solid, uranium yellow cake.

New License or Renewal
Annual Fee
Review Fees

(b) Licenses for possession and use of source material in extraction facilities such as conventional milling, in-situ leaching, heap leaching, and other processes including licenses authorizing the possession of byproduct material (tailings and other wastes) from source material extraction facilities, as well as licenses authorizing the possession and maintenance of a

Monthly fee for active
or inactive mill
Review Fees

facility in a standby mode, and licenses that authorize the receipt of byproduct material, as defined in Section 19-3-102, from other persons for possession and disposal incidental to the disposal of the uranium waste tailings generated by the licensee's milling operations.

(c) Licenses that authorize the receipt of byproduct material, as defined in Section 19-3-102, from other persons for possession and disposal.	Application Fee New License or Renewal Monthly Fee
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(d) Licenses for possession and use of source material for shielding.	New License or Renewal Annual Fee
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(e) All other source material licenses.	New License or Renewal Annual Fee
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(3) Radioactive Material Other than Source Material and Special Nuclear Material.

(a)(i) Licenses of broad scope for possession and use of radioactive material for processing or manufacturing of items containing radioactive material for commercial distribution.	New License or Renewal Annual Fee
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(a)(ii) Other licenses for possession and use of radioactive material for processing or manufacturing of items containing radioactive material for commercial distribution.	New License or Renewal Annual Fee
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(b) Licenses authorizing the	New License or Renewal Annual Fee
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processing or manufacturing and distribution or redistribution of radio-pharmaceuticals, generators, reagent kits, or sources or devices containing radioactive material.

New License or Renewal
Annual Fee

(c) Licenses authorizing distribution or redistribution of radiopharmaceuticals, generators, reagent kits, or sources or devices not involving processing of radioactive material.

New License or Renewal
Annual Fee

(d) Licenses for possession and use of radioactive material for industrial radiography operations.

New License or Renewal
Annual Fee

(e) Licenses for possession and use of sealed sources for irradiation of materials in which the source is not removed from its shield (self-shielded units).

New License or Renewal
Annual Fee

(f)(i) Licenses for possession and use of less than 10,000 curies of radioactive material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes.

New License or Renewal
Annual Fee

(f)(ii) Licenses for possession and use of 10,000

curies or more of radioactive material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes.

(g) Licenses to distribute items containing radioactive material that require device review to persons exempt from the licensing requirements of Rule R313-19, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of Rule R313-19.

New License or Renewal
Annual Fee

(h) Licenses to distribute items containing radioactive material or quantities of radioactive material that do not require device evaluation to persons exempt from the licensing requirements of Rule R313-19, except for specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of Rule R313-19.

New License or Renewal
Annual Fee

(i) Licenses to distribute items containing radioactive material that require sealed source or device review to persons generally licensed under Rule R313-21, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under Rule R313-21.

New License or Renewal
Annual Fee

(j) Licenses to distribute items containing radioactive material or quantities of radioactive material that do not require sealed source or device review to persons generally licensed under Rule R313-21, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under Rule R313-21.

New License or Renewal
Annual Fee

(k) Licenses for possession and use of radioactive material for research and development, which do not authorize commercial distribution.

New License or Renewal
Annual Fee

(l) All other specific radioactive material licenses.

New License or Renewal
Annual Fee

(m) Licenses of broad scope for possession and use of

New License or Renewal
Annual Fee

radioactive material
for research and
development
which do
not authorize
commercial
distribution.

(n) Licenses that
authorize services
for other licensees,
except licenses that
authorize leak
testing or waste
disposal services
which are subject to
the fees specified
for the listed
services.

New License or Renewal
Annual Fee

(o) Licenses that
authorize
services for
leak testing only.

New License or Renewal
Annual Fee

(4) Radioactive
Waste Disposal:

(a) Licenses
specifically
authorizing the
receipt of
waste radioactive
material from other
persons for the
purpose of
commercial disposal
by land by the
licensee.

Application Fee
New License or Renewal
Siting Review Fee

(b) Licenses
specifically
authorizing the
receipt of waste
radioactive material
from other persons
for the purpose of
packaging or
repackaging the
material. The
licensee will
dispose of the
material by
transfer to
another person
authorized to
receive or
dispose of the
material.

New License or Renewal
Annual Fee

(c) Licenses specifically authorizing the receipt of prepackaged waste radioactive material from other persons. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.

New License or Renewal
Annual Fee

(d) Licenses authorizing packaging of radioactive waste for shipment to waste disposal site where licensee does not take possession of waste material.

New License or Renewal
Annual Fee

(5) Well logging, well surveys and tracer studies.

(a) Licenses for possession and use of radioactive material for well logging, well surveys and tracer studies other than field flooding tracer studies.

New License or Renewal
Annual Fee

(b) Licenses for possession and use of radioactive material for field flooding tracer studies.

New License or Renewal
Annual Fee

(6) Nuclear laundries.

(a) Licenses for commercial collection and laundry of items contaminated with radioactive material.

New License or Renewal
Annual Fee

(7) Human use of radioactive

material.

(a) Licenses for human use of radioactive material in sealed sources contained in teletherapy devices.

New License or Renewal
Annual Fee

(b) Other licenses issued for human use of radioactive material, except licenses for use of radioactive material contained in teletherapy devices.

New License or Renewal
Annual Fee

(c) Licenses of broad scope issued to medical institutions or two or more physicians authorizing research and development, including human use of radioactive material, except licenses for radioactive material in sealed sources contained in teletherapy devices.

New License or Renewal
Annual Fee

(8) Civil Defense.

(a) Licenses for possession and use of radioactive material for civil defense activities.

New License or Renewal
Annual Fee

(9) Power Source.

(a) Licenses for the manufacture and distribution of encapsulated radioactive material wherein the decay energy of the material is used as a source for power.

New License or Renewal
Annual Fee

(10) General License.

(a) Measuring, gauging and

Fee per device

control devices as described in Subsection R313-21-22(4), other than hydrogen-3 (tritium) devices and polonium-210 devices containing no more than 10 millicuries used for producing light or an ionized atmosphere.

(b) In Vitro testing
 (c) Depleted uranium
 (d) Reciprocal recognition, as provided for in Section R313-19-30, of a license issued by the U.S. Nuclear Regulatory Commission, an Agreement State or a Licensing State.

Fee per registration certificate
 Fee per registration certificate
 Annual fee for license category listed in R313-70-7(1) through (10), per 180 days in one calendar [] year

R313-70-8. Registration and Inspection Categories and Types of Fees for Registration of Radiation Machines.

(1) For machines registered under Section R313-16-230, registrants will pay an annual registration fee and an inspection fee that shall be established in accordance with the Legislative Appropriations Act. Copies of established fee schedules may be obtained from the Director.

TABLE

FACILITY TYPE	TYPE OF FEE	
Hospital/Therapy	Registration	Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
Medical	State Inspection Registration	Per tube. Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
Podiatry	State Inspection Registration	Per tube. Annual per control

Veterinary	State Inspection Registration	unit and first tube plus annual per each additional tube connected to a control unit. Per tube. Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
Chiropractic	State Inspection Registration	Per tube. Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
Dental	State Inspection Registration	Per tube. Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
Industrial Facility with High or Very High Radiation Areas Accessible to Individuals	State Inspection	Per control unit and first tube plus each additional tube connected to a control unit.
Industrial Facility with Cabinet X-ray or Units Designed for Other Industrial Purposes	Registration	Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
Industrial Facility with Cabinet X-ray or Units Designed for Other Industrial Purposes	State Inspection Registration	Per tube. Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
Other	State Inspection Registration	Per tube. Annual per control unit and first

Acceptance of work,
performed by a
person meeting the
qualifications in
Section R313-16-400, that
demonstrates
compliance with
these rules.

State Inspection

tube plus annual
per each
additional tube
connected to a
control unit.
Per tube.
Per tube reviewed.

R313-70-9. Other Fees for Services.

TABLE

(1) Expedited application review. Applicable when, by mutual consent of the applicant and affected staff, an application request is taken out of date order and processed by staff during non-work hours.	Hourly
(2) Review of plans for decommissioning, decontamination, reclamation, or site restoration activities.	Plan Review Plus Hourly
(3) Management and oversight of impounded radioactive material.	Actual Cost
(4) License amendment, for greater than three applications in a calendar year.	Amendment Fee

KEY: radioactive materials, x-rays, registration, fees

Date of Enactment or Last Substantive Amendment: [February 18,] 2014

Notice of Continuation: September 23, 2011

Authorizing, and Implemented or Interpreted Law: 19-3-104(6)

UTAH RADIATION CONTROL BOARD

PROPOSED RULE CHANGES

UAC R313-12-3, General Provisions
UAC R313-22-33, General Requirements for the Issuance of Specific Licenses
UAC R313-25-2, Definitions

August 12, 2014

INTRODUCTION

The Nuclear Regulatory Commission (NRC) has revised Title 10 Code of Federal Regulations (10 CFR) to revise the definitions of "Construction" and "Commencement of Construction." All Agreement States (including Utah) are required to maintain rules compatible with NRC regulations. The NRC has prepared a Compatibility Action (RATS ID 2011-2) to track the implementation of the changes and the NRC notified the Utah Division of Radiation Control (DRC) that the revised regulations need to be adopted by November 14, 2014.

RULEMAKING PROCESS

The Board is requested to approve the revision of the pertinent sections of R313-12, R313-22, and R313-25 to address the required changes. DRC staff has reviewed the proposed rule changes and determined that the two revised definitions will be compatible with the NRC regulations. The definitions will be located in Section R313-12-3. One or both terms are used in a number of rules in R313. The use of the terms will apply to Rules R313-17, R313-22, R313-24, and R313-25.

The NRC performed a regulatory analysis of this amendment and determined that the rule change does not impose any new burden or reporting requirements on a licensee, the NRC or an Agreement State. In accordance with administrative rulemaking procedures, the rulemaking will be submitted before the filing deadline of August 15, 2014. Public comment on the revisions will be accepted from September 1, 2014 until October 1, 2014. The DRC staff will collect and analyze the public comments and prepare responses for the Board's review.

RECOMMENDATION

The Division of Radiation Control recommends the Board initiate rulemaking by approving the filing of the proposed rule changes to R313-12-3, R313-22-33, and R313-25-2 with the Division of Administrative Rules. The proposed rule changes will be published in a subsequent issue of the *Utah State Bulletin*, notifying interested stakeholders and the public of the proposed changes and initiating a 30-day public comment period.

R313. Environmental Quality, Radiation Control.

R313-12. General Provisions.

R313-12-3. Definitions.

As used in these rules, these terms shall have the definitions set forth below. Additional definitions used only in a certain rule will be found in that rule.

"A1" means the maximum activity of special form radioactive material permitted in a Type A package.

"A2" means the maximum activity of radioactive material, other than special form radioactive material, low specific activity, and surface contaminated object material permitted in a Type A package.

These values are either listed in 10 CFR 71, Appendix A, which is incorporated by reference in Section R313-19-100 or may be derived in accordance with the procedures prescribed in 10 CFR 71, Appendix A, which is incorporated by reference in Section R313-19-100.

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

"Accelerator produced radioactive material" means material made radioactive by a particle accelerator.

"Act" means Utah Radiation Control Act, Title 19, Chapter 3.

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

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

"Address of use" means the building or buildings that are identified on the license and where radioactive material may be received, used or stored.

"Advanced practice registered nurse" means an individual licensed by this state to engage in the practice of advanced practice registered nursing. See Sections 58-31b-101 through 58-31b-801, Nurse Practice Act.

"Agreement State" means a state with which the United States Nuclear Regulatory Commission or the Atomic Energy Commission has entered into an effective agreement under Section 274 b. of the Atomic Energy Act of 1954, as amended (73 Stat. 689).

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

"Airborne radioactivity area" means: a room, enclosure, or area in which airborne radioactive material exists in concentrations:

(a) In excess of the derived air concentrations (DACs), specified in Rule R313-15, or

(b) 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.

"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 or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and

socioeconomic considerations, and in relation to utilization of nuclear energy and licensed or registered sources of radiation in the public interest.

"Area of use" means a portion of an address of use that has been set aside for the purpose of receiving, using, or storing radioactive material.

"Background radiation" means radiation from cosmic sources; naturally occurring radioactive materials, including radon, except as a decay product of source or special nuclear material, and including 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 Department under the Radiation Control Act or Rules.

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

"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.

"Board" means the Radiation Control Board created under Section 19-1-106.

"Byproduct material" means:

(a) a radioactive material, with the exception of special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

(b) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition;

(c) (i) a discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) material that

(A) has been made radioactive by use of a particle accelerator; and

(B) is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(d) a discrete source of naturally occurring radioactive material, other than source material, that

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, has determined would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

"Calibration" means the determination of:

(a) the response or reading of an instrument relative to a series of known radiation values over the range of the instrument; or

(b) the strength of a source of radiation relative to a standard.

"CFR" means Code of Federal Regulations.

"Chelating agent" means a chemical ligand that can form coordination compounds in which the ligand occupies more than one coordination position. The agents include beta diketones, certain proteins, amine polycarboxylic acids, hydroxycarboxylic acids, gluconic acid, and polycarboxylic acids.

"Chiropractor" means an individual licensed by this state to engage in the practice of chiropractic. See Sections 58-73-101 through 58-73-701, Chiropractic Physician Practice Act.

"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.

"Commencement of construction" means taking any action defined as "construction" or any other activity at the site of a facility subject to these rules that have a reasonable nexus to radiological health and safety.

"Commission" means the U.S. Nuclear Regulatory Commission.

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

"Committed effective dose equivalent" (HE,50), is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues.

"Consortium" means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution, a Federal facility, or a medical facility.

"Construction" means the installation of wells associated with radiological operations; for example, 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 these rules that are related to radiological safety or security. The term "construction" does not include:

(a) changes for temporary use of the land for public recreational purposes;

(b) 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;

(c) 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;

(d) erection of fences and other access control measures that are not related to the safe use of, or security of, radiological materials subject to this part;

(e) excavation;

(f) erection of support buildings; for example, construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings; for use in connection with the construction of the facility;

(g) building of service facilities; for example, paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines;

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

(i) taking any other action that has no reasonable nexus to radiological health and safety.

"Controlled area" means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee or registrant for any reason.

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

"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).

"Cyclotron means a particle accelerator in which the charged particles travel in an outward spiral or circular path. A cyclotron accelerates charged particles at energies usually in excess of 10 megaelectron volts and is commonly used for production of short half-life radionuclides for medical use.

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

(a) release of property for unrestricted use and termination of the license; or

(b) release of the property under restricted conditions and termination of the license.

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

"Dentist" means an individual licensed by this state to engage in the practice of dentistry. See sections 58-69-101 through 58-69-805, Dentist and Dental Hygienist Practice Act.

"Department" means the Utah State Department of Environmental Quality.

"Depleted uranium" means the source material uranium in which

the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

"Diffuse source" means a radionuclide that has been unintentionally produced or concentrated during the processing of materials for use for commercial, medical, or research activities.

"Director" means the Director of the Division of Radiation Control.

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

"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.

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

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

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

"Effective dose equivalent" (H_E), means the sum of the products of the dose equivalent to each organ or tissue (H_T), and the weighting factor (w_T) applicable to each of the body organs or tissues that are irradiated.

"Embryo/fetus" means the developing human organism from conception until the time of birth.

"Entrance or access point" means an opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed or registered radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

"Explosive material" means a chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

"EXPOSURE" when capitalized, means the quotient of dQ by dm where " dQ " is the absolute value of the total charge of the ions of one sign produced in air when all the electrons, both negatrons and positrons, liberated by photons in a volume element of air having a mass of " dm " are completely stopped in air. The special unit of EXPOSURE is the roentgen (R). See Section R313-12-20 Units of exposure and dose for the SI equivalent. For purposes of these rules, this term is used as a noun.

"Exposure" when not capitalized as the above term, means being exposed to ionizing radiation or to radioactive material. For purposes of these rules, this term is used as a verb.

"EXPOSURE rate" means the EXPOSURE per unit of time, such as

roentgen per minute and milliroentgen per hour.

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

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

"Facility" means the location within one building, vehicle, or under one roof and under the same administrative control

(a) at which the use, processing or storage of radioactive material is or was authorized; or

(b) at which one or more radiation-producing machines or radioactivity-inducing machines are installed or located.

"Former United States Atomic Energy Commission (AEC) or United States Nuclear Regulatory Commission (NRC) licensed facilities" means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or critical mass experimental facilities where AEC or NRC licenses have been terminated.

"Generally applicable environmental radiation standards" means standards issued by the U.S. Environmental Protection Agency 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.

"Gray" (Gy) means the SI unit of absorbed dose. One gray is equal to an absorbed dose of one joule per kilogram.

"Hazardous waste" means those wastes designated as hazardous by the U.S. Environmental Protection Agency rules in 40 CFR Part 261.

"Healing arts" means the disciplines of medicine, dentistry, osteopathy, chiropractic, and podiatry.

"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 one mSv (0.1 rem), in one hour at 30 centimeters from the source of radiation or from a surface that the radiation penetrates. For purposes of these rules, rooms or areas in which diagnostic x-ray systems are used for healing arts purposes are not considered high radiation areas.

"Human use" means the intentional internal or external administration of radiation or radioactive material to human beings.

"Individual" means a human being.

"Individual monitoring" means the assessment of:

(a) dose equivalent, by the use of individual monitoring devices or, by the use of survey data; or

(b) committed effective dose equivalent by bioassay or by determination of the time weighted air concentrations to which an individual has been exposed, that is, DAC-hours.

"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.

"Inspection" means an official examination or observation

including, but not limited to, tests, surveys, and monitoring to determine compliance with rules, orders, requirements and conditions applicable to radiation sources.

"Interlock" means a device arranged or connected requiring the occurrence of an event or condition before a second condition can occur or continue to occur.

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

"Lens dose equivalent" (LDE) applies to 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).

"License" means a license issued by the Director in accordance with the rules adopted by the Board.

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

"Licensed or registered material" means radioactive material, received, possessed, used or transferred or disposed of under a general or specific license issued by the Director.

"Licensing state" means a state which, prior to November 30, 2007, was provisionally or finally designated as such by the Conference of Radiation Control Program Directors, Inc., which reviewed state regulations to establish equivalency with the Suggested State Regulations and ascertained whether a State has an effective program for control of natural occurring or accelerator produced radioactive material.

"Limits". See "Dose limits".

"Lost or missing source of radiation" means licensed or registered sources of radiation whose location is unknown. This definition includes, but is not limited to, radioactive material that has been shipped but has not reached its planned destination and whose location cannot be readily traced in the transportation system.

"Major processor" means a user processing, handling, or manufacturing radioactive material exceeding Type A quantities as unsealed sources or material, or exceeding four times Type B quantities as sealed sources, but does not include nuclear medicine programs, universities, industrial radiographers, or small industrial programs.

Type A and B quantities are defined in 10 CFR 71.4.

"Member of the public" means an individual except when that individual is receiving an occupational dose.

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

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

"Natural radioactivity" means radioactivity of naturally occurring nuclides.

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

"Occupational dose" means the dose received by an individual in the course of employment in which the individual's assigned duties for the licensee or registrant involve exposure to sources of radiation, whether or not the sources of radiation are in the

possession of the licensee, registrant, or other person. Occupational dose does not include doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released in accordance with Rule R313-32, from voluntary participation in medical research programs, or as a member of the public.

"Package" means the packaging together with its radioactive contents as presented for transport.

"Particle accelerator" means a machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of one megaelectron volt. For purposes of these rules, "accelerator" is an equivalent term.

"Permit" means a permit issued by the Director in accordance with the rules adopted by the Board.

"Permitee" means a person who is permitted by the Department in accordance with these rules and the Act.

"Person" means an individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, or another state or political subdivision or agency thereof, and a legal successor, representative, agent or agency of the foregoing.

"Personnel monitoring equipment," see individual monitoring devices.

"Pharmacist" means an individual licensed by this state to engage in the practice of pharmacy. See Sections 58-17a-101 through 58-17a-801, Pharmacy Practice Act.

"Physician" means both physicians and surgeons licensed under Section 58-67-301, Utah Medical Practice Act, and osteopathic physicians and surgeons licensed under Section 58-68-301, Utah Osteopathic Medical Practice Act.

"Physician assistant" means an individual licensed by this state to engage in practice as a physician assistant. See Sections 58-70a-101 through 58-70a-504, Physician Assistant Act.

"Podiatrist" means an individual licensed by this state to engage in the practice of podiatry. See Sections 58-5a-101 through 58-5a-501, Podiatric Physician Licensing Act.

"Practitioner" means an individual licensed by this state in the practice of a healing art. For these rules, only the following are considered to be a practitioner: physician, dentist, podiatrist, chiropractor, physician assistant, and advanced practice registered nurse.

"Protective apron" means an apron made of radiation-attenuating materials used to reduce exposure to radiation.

"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 or registrant. 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 Rule R313-32, or from voluntary participation in medical research programs.

"Pyrophoric material" means any liquid that ignites spontaneously in dry or moist air at or below 130 degrees Fahrenheit (54.4 degrees Celsius) or any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited and, when ignited, burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

"Quality factor" (Q) means the modifying factor, listed in Tables 1 and 2 of Section R313-12-20 that is used to derive dose equivalent from absorbed dose.

"Rad" means 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

"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, like radiowaves or microwaves, visible, infrared, or ultraviolet light.

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

"Radiation machine" means a device capable of producing radiation except those devices with radioactive material as the only source of radiation.

"Radiation safety officer" means an individual who has the knowledge and responsibility to apply appropriate radiation protection rules and has been assigned such responsibility by the licensee or registrant. For a licensee authorized to use radioactive materials in accordance with the requirements of Rule R313-32,

(1) the individual named as the "Radiation Safety Officer" must meet the training requirements for a Radiation Safety Officer as stated in Rule R313-32; or

(2) the individual must be identified as a "Radiation Safety Officer" on

(a) a specific license issued by the Director, the U.S. Nuclear Regulatory Commission, or an Agreement State that authorizes the medical use of radioactive materials; or

(b) a medical use permit issued by a U.S. Nuclear Regulatory Commission master material licensee.

"Radiation source". See "Source of radiation."

"Radioactive material" means a solid, liquid, or gas which emits radiation spontaneously.

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

"Radiobioassay". See "Bioassay".

"Registrant" means any person who is registered with respect to radioactive materials or radiation machines with the Director or is legally obligated to register with the Director pursuant to these rules and the Act.

"Registration" means registration with the Department in

accordance with the rules adopted by the Board.

"Regulations of the U.S. Department of Transportation" means 49 CFR 100 through 189.

"Rem" means 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 sievert (Sv).

"Research and development" means:

(a) theoretical analysis, exploration, or experimentation; or
(b) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes. Research and development does not include the internal or external administration of radiation or radioactive material to human beings.

"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 Rule R313-15.

"Restricted area" means an area, access to which is limited by the licensee or registrant for the purpose of protecting individuals against undue risks from exposure to sources of radiation. A "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.

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

"Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.

"Shallow dose equivalent" (Hs) which applies to the external exposure of the skin of the whole body or the skin of an extremity, is taken as the dose equivalent at a tissue depth of 0.007 centimeter (seven mg per cm²).

"SI" means an abbreviation of the International System of Units.

"Sievert" (Sv) means 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.

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

"Source container" means a device in which sealed sources are transported or stored.

"Source material" means:

(a) uranium or thorium, or any combination thereof, in any

physical or chemical form, or

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

"Source material milling" means any activity that results in the production of byproduct material as defined by (b) of "byproduct material".

"Source of radiation" means any radioactive material, or a device or equipment emitting or capable of producing ionizing radiation.

"Special form radioactive material" means radioactive material which satisfies the following conditions:

(a) it is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

(b) the piece or capsule has at least one dimension not less than five millimeters (0.197 inch); and

(c) it satisfies the test requirements specified by the U.S. Nuclear Regulatory Commission in 10 CFR 71.75. A special form encapsulation designed in accordance with the U.S. Nuclear Regulatory Commission requirements in effect on June 30, 1983, and constructed prior to July 1, 1985, may continue to be used. A special form encapsulation designed in accordance with the requirements of Section 71.4 in effect on March 31, 1996, (see 10 CFR 71 revised January 1, 1983), and constructed before April 1, 1998, may continue to be used.

Any other special form encapsulation must meet the specifications of this definition.

"Special nuclear material" means:

(a) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and other material that the U.S. Nuclear Regulatory Commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material; or

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

"Special nuclear material in quantities not sufficient to form a critical mass" means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; uranium-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams or a combination of them in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed one. For example, the following quantities in combination would not exceed the limitation and are within the formula:

$((175(\text{Grams contained U-235})/350) + (50(\text{Grams U-233}/200) + (50(\text{Grams Pu})/200))$ is equal to one.

"Survey" means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of sources of radiation. When appropriate, such evaluation includes, but is not limited to, tests, physical examinations and measurements of levels of radiation or concentrations of radioactive material present.

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

"These rules" means "Utah Radiation Control Rules".

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

"Total organ dose equivalent" (TODE) means the sum of the deep dose equivalent and the committed dose equivalent to the organ receiving the highest dose as described in Subsection R313-15-1107(1)(f).

"U.S. Department of Energy" means the Department of Energy established by Public Law 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the Department exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c), and (d) of Public Law 93-438, October 11, 1974, 88 Stat. 1233 at 1237, effective January 19, 1975 known as the Energy Reorganization Act of 1974, and retransferred to the Secretary of Energy pursuant to section 301(a) of Public Law 95-91, August 14, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977 known as the Department of Energy Organization Act.

"Unrefined and unprocessed ore" means ore in its natural form prior to processing, like grinding, roasting, beneficiating or refining.

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

"Waste" means those low-level radioactive wastes containing radioactive material that are acceptable for disposal in a land disposal facility. For the purposes 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 paragraphs (b), (c), and (d) of the definition of byproduct material found in Section R313-12-3.

"Week" means seven consecutive days starting on Sunday.

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

"Worker" means an individual engaged in work under a license or registration issued by the Director and controlled by a licensee or registrant, but does not include the licensee or registrant.

"Working level" (WL), means any combination of short-lived radon daughters in one 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.

"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.

"Year" means the period of time beginning in January used to determine compliance with the provisions of these rules. The licensee

or registrant may change the starting date of the year used to determine compliance by the licensee or registrant provided that the decision to make the change is made not later than December 31 of the previous year. If a licensee or registrant changes in a year, the licensee or registrant shall assure that no day is omitted or duplicated in consecutive years.

KEY: definitions, units, inspections, exemptions

Date of Enactment or Last Substantive Amendment: [~~March 19, 2013~~ 2014

Notice of Continuation: July 7, 2011

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

R313. Environmental Quality, Radiation Control.

R313-22. Specific Licenses.

R313-22-33. General Requirements for the Issuance of Specific Licenses.

(1) A license application shall be approved if the Director determines that:

(a) the applicant and all personnel who will be handling the radioactive material are qualified by reason of training and experience to use the material in question for the purpose requested in accordance with these rules in a manner as to minimize danger to public health and safety or the environment;

(b) the applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or the environment;

(c) the applicant's facilities are permanently located in Utah, otherwise the applicant shall seek reciprocal recognition as required by Section R313-19-30;

(d) the issuance of the license will not be inimical to the health and safety of the public;

(e) the applicant satisfies applicable special requirements in Sections R313-22-50 and R313-22-75, and Rules R313-24, R313-25, R313-32, R313-34, R313-36, or R313-38; and

(f) in the case of an application for a license to receive and possess radioactive material for commercial waste disposal by land burial, or for the conduct of other activities which the Director determines will significantly affect the quality of the environment, the Director, before commencement of construction of the plant or facility in which the activity will be conducted, has concluded, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. The Director shall respond to the application within 60 days. Commencement of construction prior to a response and conclusion shall be grounds for denial of a license to receive and possess radioactive material in the plant or facility. ~~[As used in this paragraph the term "commencement of construction" means clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.]~~

KEY: specific licenses, decommissioning, broad scope, radioactive materials

Date of Enactment or Last Substantive Amendment: ~~February 14, 2014~~ 2014

Notice of Continuation: September 23, 2011

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

R313. Environmental Quality, Radiation Control.

R313-25. License Requirements for Land Disposal of Radioactive Waste - General Provisions.

R313-25-2. Definitions.

As used in Rule R313-25, the following definitions apply:

"Active maintenance" means significant activity needed during the period of institutional control to maintain a reasonable assurance that the performance objectives in Sections R313-25-20 and R313-25-21 are met. Active maintenance may include the pumping and treatment of water from a disposal unit, the replacement of a disposal unit cover, or other episodic or continuous measures. Active maintenance does not include custodial activities like repair of fencing, repair or replacement of monitoring equipment, revegetation, minor additions to soil cover, minor repair of disposal unit covers, and general disposal site upkeep.

"Approval application" means an application by a radioactive waste facility regulated under Title 19, Chapter 3 or Title 19, Chapter 5, for a permit, permit modification, license, license amendment, or other authorization.

"Buffer zone" means a portion of the disposal site that is controlled by the licensee and that lies under the disposal units and between the disposal units and the boundary of the site.

~~["Commencement of construction" means clearing of land, excavation, or other substantial action that could adversely affect the environment of a land disposal facility. The term does not mean disposal site exploration, necessary roads for disposal site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the disposal site or the protection of environmental values.]~~

"Custodial agency" means an agency of the government designated to act on behalf of the government owner of the disposal site.

"Day" for purposes of this Rule means calendar days.

"Disposal" means the isolation of wastes from the biosphere by placing them in a land disposal facility.

"Disposal site" means that portion of a land disposal facility which is used for disposal of waste. It consists of disposal units and a buffer zone.

"Disposal unit" means a discrete portion of the disposal site into which waste is placed for disposal. For near-surface disposal, the disposal unit may be a trench.

"Engineered barrier" means a man-made structure or device intended to improve the land disposal facility's performance under Rule R313-25.

"Groundwater permit" means a groundwater quality discharge permit issued under the authority of Title 19, Chapter 5 and Rule R317-6.

"Hydrogeologic unit" means a soil or rock unit or zone that has a distinct influence on the storage or movement of ground water.

"Inadvertent intruder" means a person who may enter the disposal site after closure and engage in activities unrelated to post closure management, such as agriculture, dwelling construction, or other pursuits which could, by disturbing the site, expose individuals

to radiation.

"Intruder barrier" means a sufficient depth of cover over the waste that inhibits contact with waste and helps to ensure that radiation exposures to an inadvertent intruder will meet the performance objectives set forth in Rule R313-25, or engineered structures that provide equivalent protection to the inadvertent intruder.

"Land disposal facility" means the land, buildings and structures, and equipment which are intended to be used for the disposal of radioactive waste.

"Monitoring" means observing and making measurements to provide data to evaluate the performance and characteristics of the disposal site.

"Near-surface disposal facility" means a land disposal facility in which waste is disposed of within approximately the upper 30 meters of the earth's surface.

"Site closure and stabilization" means those actions that are taken upon completion of operations that prepare the disposal site for custodial care, and that assure that the disposal site will remain stable and will not need ongoing active maintenance.

"Stability" means structural stability.

"Surveillance" means monitoring and observation of the disposal site to detect needs for maintenance or custodial care, to observe evidence of intrusion, and to ascertain compliance with other license and regulatory requirements.

"Tolling period," for purposes of this Rule, means a period during which days are not counted toward the deadlines specified in Subsections R313-25-6(3)(c), (4)(c)(i), (5)(b)(i), and (6)(b)(i).

"Treatment" means the stabilization or the reduction in volume of waste by a chemical or a physical process.

"Waste" means those low-level radioactive wastes containing radioactive material that are acceptable for disposal in a land disposal facility. For the purposes 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 (b), (c), and (d) of the definition for byproduct material found in Section R313-12-3.

KEY: radiation, radioactive waste disposal, depleted uranium

Date of Enactment or Last Substantive Amendment: [April 3, 2014]

Notice of Continuation: September 23, 2011

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

**MAMMOGRAPHY IMAGING MEDICAL PHYSICISTS
CERTIFICATION OF APPLICANTS**

BOARD ACTION ITEM

In accordance with Subsection 19-3-103.5(2)(f) of the Utah Code Annotated, the Board shall review the qualifications of, and issue certificates of approval to, individuals who: (i) survey mammography equipment; or (ii) oversee quality assurance practices at mammography facilities. This statutory requirement was effective May 8, 2012.

In the past, these individuals have been referred to as a Mammography Imaging Medical Physicist (MIMP). In July 2014, Kyle Siwek filed an application to be certified as a MIMP. Division of Radiation Control staff reviewed the applicant's qualifications. Based on this review, the Director of the Division of Radiation Control recommends the Board issue a certificate of approval for the applicant reviewed and presented to the Board. This is the review process that was implemented to meet the requirements of Utah Administrative Code Section R313-28-140 and the process has been used for the past 16 years.

Lisa Mechem will present information about the certification of Mammography Imaging Physicists.



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF RADIATION CONTROL
Rusty Lundberg
Director

MEMORANDUM

TO: Rusty Lundberg, Director
FROM: Lisa Mechem 
DATE: August 6, 2014
SUBJECT: Mammography Imaging Medical Physicist

I have reviewed the application and supporting documentation for a Kyle Siwek who seeks certification as a Mammography Imaging Medical Physicist. Mr. Siwek submitted a complete application and demonstrated that he is eligible to be certified.

Recommendation

The Division of Radiation Control Director recommends that the Board approve the individual named above as a Mammography Imaging Medical Physicist. The effective date of the approval should be from August 12, 2014 to May 31, 2015.

Division of Radiation Control
Activities Report Summary

2nd Quarter (April – June) 2014

X-ray Registration Program

LDS Hospital – This X-ray Registrant (registration number 2014) reported a misadministration on June 6, 2014. The event involved a female patient and her treatment with a therapeutic radiation machine. The misadministration involved the wrong treatment site and the event occurred during the third fraction of a 10-fraction treatment plan. Improvements needed to prevent recurrence were identified by the Registrant and actions to prevent recurrence have been implemented. The Registrant has asserted that the patient should experience little to no adverse effect from the radiation that was delivered to the wrong treatment site. This is because “the area of the spine that was incorrectly treated contains significant disease burden so there could be some slight improvement in her clinical symptoms, however it was not being targeted in the present course of treatment.”

Radioactive Materials Program

Violations assigned a Severity Level I, II, or III, or where a monetary Penalty has been proposed.

During the 2nd quarter of 2014, there were no licensees with inspection findings that met the reporting criteria.

Number of current licenses 191 representing 180 licensees

Radioactive Material Inspections 23

Number of new licenses issued 3

Number of licenses renewed 4

Number of licenses amended 80

Number of licenses terminated 2

Low-Level Waste

EnergySolutions

Number of HP Inspections conducted 10

Number of Eng. Inspections 3

Number of GW Inspections 5

Number of license amendments performed 2

Generator Site Access Program

Number of incoming shipments that were inspected, GSA program 442

Number of NOED's, NOD's, and NOV's that were issued 0 NOED, 0 NOD, and 3 NOV's

Uranium Mills Program

Number of HP Inspections Energy Fuels 2 Uranium One 0 Rio Algom 0
Number of Eng. Inspections Energy Fuels 1 Uranium One 0 Rio Algom 0
Number of GW Inspections Energy Fuels 2 Uranium One 0 Rio Algom 1
Number of license amendments performed 0

Radon Program

Radon Tests conducted: 830
Radon Mitigations: 250
Radon Resistant New Construction: 82
RRNC classes: 3 (taught by John Seidel)
Real Estate Classes: 1
Exhibits/Trade Shows: 1
Local Health District Visits: 12
Press Releases: 0

X-Ray Program

Number of current registrations 2729 , a decrease of 3 from the previous quarter
Number of Inspections conducted by DRC staff 152
Number of Inspections conducted by Qualified Experts 54