



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 – *DEQ Executive Director*

Rusty Lundberg, *Executive Secretary*

**RADIATION CONTROL BOARD MEETING**

**October 14, 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#)

**TENTATIVE AGENDA**

**I. Welcome**

**II. Approval of the **Minutes** from the August 12, 2014 Board Meeting**

**III. Administrative Rulemaking**

**a. Review of public comments:**

- i. Proposed changes to **R313-26**, *Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities*
- ii. 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)

**b. Approve for final adoption:**

- i. Proposed changes to **R313-70**, *Payments, Categories, and Types of Fees*,
- ii. 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)

**c. Approve for rulemaking and public comment:**

- i. Proposed changes to **R313-19**, *Requirements of General Applicability to Licensing of Radioactive Material* and creation of R313-37, *Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material*, (NRC RATS ID – 2013-1)

**d. Petition for rulemaking:**

- i. Aribex **petition to amend** R313-28, *Use of X-rays in the Healing Arts*, for NOMAD MD and NOMAD 75kV Xray sources

#### IV. Information Items

- a. **Nuclear Regulatory Commission** – activity update
- b. **Uranium Mills**
  - i. White Mesa Mill – Energy Fuels Resources – status update
  - ii. Shootaring Canyon Mill – Uranium One / Anfield Resources – Request for transfer of control
- c. **Low-level Radioactive Waste -- EnergySolutions**
  - i. **Sealed Source Variance** – Update
  - ii. **ResinSolutions (Erwin, TN) – Presentation and update**
  - iii. Ground Water Discharge Permit Renewal and Environmental Monitoring Plan Revisions – Update
  - iv. Depleted Uranium Performance Assessment – Update
- d. **Other Items**
  - i. **3rd Quarter Activity Report**
  - ii. Introduction of new staff

#### V. Public Comment

#### VI. Next Scheduled Board Meeting: **Monday, November 10, 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](mailto:dpowers@utah.gov).



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Amanda Smith – *Executive Director*  
Rusty Lundberg, *Executive Secretary*

**MINUTES  
OF  
THE UTAH RADIATION CONTROLBOARD  
August 12, 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)  
Matt Rydalch  
Peter Jenkins, CHP, Ph.D.  
Richard Codell, Ph.D.

**BOARD MEMBERS  
ABSENT/EXCUSED**

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

**DRC STAFF/OTHER DEO MEMBERS  
PRESENT**

Craig Jones, DRC Section Manager  
Phil Goble, DRC Section Manager  
Laura Lockhart (via phone), Attorney General's Office  
Lisa Mechem, DRC Staff  
Spencer Wickham, DRC Staff  
Ryan Johnson, DRC Staff  
Connie Rauen, DRC Staff  
Nicole Carrell, DRC Staff  
MaryAnn Owen, DRC Staff

**PUBLIC**

Sean McCandless, EnergySolutions  
Dan Shrum, EnergySolutions  
Robert Sobocinski, EnergySolutions  
Tim Orton, EnergySolutions  
Gary Guelker, Jenson & Guelker  
Matt Pacenza, HEAL Utah  
Brian Maffly, Salt Lake Tribune

I. Welcome

Dr. 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 June 10, 2014 Board Meeting

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

**MOTION MADE BY MR MATT RYDALCH TO APPROVE THE MINUTES FROM THE JUNE 10, 2014 BOARD MEETING.**

**SECONDED BY MR. SCOTT BIRD.**

**MOTION CARRIED AND PASSED UNANIMOUSLY.**

III. Administrative Rulemaking

- a. Proposed changes to R313-17, *Administrative Procedures*, R313-24, *Uranium Mills and Source Material Mill Tailings Disposal Facility Requirements*

Ms. Laura Lockhart, Attorney General's Office, gave the Board an overview on the procedures and statutory requirements, regarding public participation procedures for licensing uranium mills and radioactive byproduct material management, per 42 U.S.C. §2021(o)(3). Ms. Lockhart requested that the proposed changes for R313-17 and R313-24 be approved for rulemaking and public comment. Mr. Rusty Lundberg, Director, updated the Board on the time frame on filing rules with the Division of Administrative Rules and if approved the rulemaking would be published on September 1, 2014 in the *Utah State Bulletin*.

**MOTION MADE BY COMMISSIONER JERRY HURST TO INITIATE RULEMAKING, WITH A 30-DAY COMMENT PERIOD FOR THE LANGUAGE PROPOSED FOR R313-17 AND R313-24.**

**SECONDED BY MR. BRADY BRADFORD.**

**MOTION CARRIED AND PASSED UNANIMOUSLY.**

- b. Proposed changes to R313-26, *Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities*

Dr. Peter Jenkins, Chairman, updated the Board on the sub-committee's (Commissioner Jerry Hurst, Mr. Scott Bird, Mr. Brady Bradford, Dr. Peter Jenkins) work on the proposed changes to R313-26. Dr. Jenkins explained that several meetings were held to come up with the correct wording, language and proposed changes to R313-26 to meet the original

legislative intent. The proposed rule was also revised to address comments received during the informal public comment period. Ms. Laura Lockhart explained that some of the changes were done to address the concerns of facilities that are regulated by the NRC (e.g. nuclear reactors). Dr. Jenkins, recommended that the proposed changes to R313-26 be approved for rulemaking and public comment. Dr. Jenkins stated the intent of the sub-committee was for the proposed rule to be presented to the larger board for consideration to initiate rulemaking for a 30-day public comment period.

**MOTION MADE BY MR. SCOTT BIRD TO ADOPT RULE R313-26 AS PROPOSED AND PROVIDED IN THE BOARD PACKET AND TO INITIATE THE RULEMAKING PROCESS WITH A 30-DAY COMMENT PERIOD.**

**SECONDED BY MR. MATT RYDALCH.**

**MOTION CARRIED AND PASSED UNANIMOUSLY.**

c. Proposed changes to R313-70, *Payments, Categories, and Types of Fees*

Mr. Craig Jones stated the proposed rulemaking action was identified by DRC staff and it is not associated with any rulemaking actions taken by Nuclear Regulatory Commission, so there are no compatibility issues associated with the proposed changes. The proposed changes include: 1) adding rule, section and sub-section before each citation; 2) the due date for x-ray registration fees is being changed from July 30<sup>th</sup> to a date specified by the Director; 3) adding provisions for transferring delinquent accounts to the Office of State Debt Collection, as account delinquents will no longer be assessed late fees. Instead, the Office of Debt Collection will assess late fees. The proposed changes also specify the circumstances that need to be met before the Director can renew an expired radioactive materials license. The recommendation of the Director is to approve the proposed changes to R313-70 and direct the staff to file changes for rulemaking with the Division of Administrative Rules for a 30-day comment period.

**MOTION MADE BY MR. SCOTT BIRD TO INITIATE RULEMAKING, WITH A 30-DAY COMMENT PERIOD FOR THE LANGUAGE PROPOSED FOR R313-70.**

**SECONDED BY COMMISSIONER JERRY HURST.**

**MOTION CARRIED AND PASSED UNANIMOUSLY.**

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)

Mr. Craig Jones explained that this proposed rulemaking is being performed to meet compatibility requirements with the Nuclear Regulatory Commission (NRC). Specifically, the NRC has modified its definition for “construction” and “commencement of construction.” These definitions will be revised in or added to rules R313-12, R313-22,

and R313-25. These compatibility requirements are described in NRC RATS ID – 2011-2. As an Agreement State with the NRC, Utah is required to adopt these requirements by November 14, 2014.

**MOTION MADE BY MR. BRADY BRADFORD TO ACCEPT THE DIVISION'S RECOMMENDATIONS AND TO PROCEED WITH RULEMAKING IN ORDER TO BE COMPATIBLE WITH NUCLEAR REGULATORY COMMISSION'S REQUIREMENTS.**

**SECONDED BY MR. SCOTT BIRD.**

**MOTION CARRIED AND PASSED UNANIMOUSLY.**

IV. Mammography Imaging Medical Physicist – Request for approval of Kyle Siwek (UCA 19-3-103.5(f))

Dr. Lisa Mechem, informed the Board of the application received in July 2014 from Mr. Kyle Siwek. The application was reviewed by DRC staff and Director's recommendation is for the Board to approve Mr. Kyle Siwek as a Mammography Imaging Medical Physicist for the State of Utah.

**MOTION MADE BY DR. DICK CODELL TO APPROVE MR. KYLE SIWEK AS MAMMOGRAPHY IMAGING MEDICAL PHYSICIST.**

**SECONDED BY MR. BRADY BRADFORD.**

**MOTION CARRIED AND PASSED UNANIMOUSLY.**

IV. Information Items

a. Nuclear Regulatory Commission – activity update – Mr. Rusty Lundberg informed the Board that there will be a change in NRC Commissioners as Commissioner Magwood resigned and Commissioner Apostolakis was not reappointed by Pres. Obama. New nominees are awaiting confirmation by the U.S. Senate.

b. Uranium Mills

i. Energy Fuels Resources – White Mesa Mill – Mr. Phil Goble described that the License Renewal will be exposed to public comment early next year. On July 11, 2014 an amendment request for the Mill to receive alternate feed from the Dawn Mining Midnite Mine was signed. On August 11, 2014 the DRC received a Request for Agency Action for the amendment from the Ute Mountain Tribe. Mr. Goble also stated that the Chloroform Corrective Action Plan and Groundwater Permit Renewal will go out for public comments in the near future.

Mr. Scott Bird asked for an update on Shootaring Canyon Mill – Mr. Phil Goble and Mr. Rusty Lundberg informed the Board that a new request for transfer of control had been

received from Anfield Resources. The request is currently under DRC review and a decision is expected by October 31, 2014.

c. Low-level Radioactive Waste - Energy Solutions

i. Mr. Phil Goble explained that the EnergySolutions' Ground Water Discharge Permit Renewal and a revision to the Environmental Monitoring Plan are currently out for public comment. Public comment will be accepted until September 22, 2014. A public meeting will be held on September 17, 2014.

ii. Depleted Uranium Performance Assessment update – Mr. Rusty Lundberg, gave an update to the Board on the review of the Depleted Uranium Performance Assessment. Mr. Lundberg explained that all updates on the Depleted Uranium Performance review are available on the DRC website. The Public comment period will begin on September 8, 2014 and end on October 24, 2014. Comments received will be evaluated and a final decision on the Depleted Uranium Performance Assessment is expected in December.

d. Other Items

i. Second Quarter 2014 Activities Report

Mr. Peter Jenkins, Chairman, asked if any of the Board members had questions on the Second Quarter 2014 Activities Report. Mr. Jenkins had a question on the NOV's mentioned in the report. Mr. Phil Goble gave a brief update on the NOV's and offered to bring detailed information at the next meeting, if requested by the Board; however, no such request was made.

V. Public Comment

Adjourned 1:35 PM

**Next Scheduled Board Meeting: Tuesday, October 14, 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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# UTAH RADIATION CONTROL BOARD

October 14, 2014

## PROPOSED RULE CHANGES

### R313-26

### Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities

#### BACKGROUND

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 grants the Director of the Utah Division of Radiation Control (DRC) discretion in issuing a permit to a low-level waste generator or broker for access to a radioactive disposal site in Utah in consideration of a generator or broker agreeing to grant the DRC reasonable access to its facilities for the verification of Utah requirements regarding low-level radioactive waste.

#### RULEMAKING PROCESS

During its November, 2013 meeting, the Board 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 presented the revised proposed rule in the August 12, 2014 Board meeting. During the August, 2014 Board Meeting, the Board approved the filing of the proposed rule changes with the Division of Administrative rules and directed staff to give notice to the public for a 30-day comment period. The proposed rule changes were published in the September 1, 2014 issue of the *Utah State Bulletin*.

On September 2, 2014, Division staff issued a List Server notice that invited the Public to submit comments on R313-26 from September 2, 2014 through October 1, 2014. Additional information about the opportunity to submit comments was provided on the Division's website.

#### COMMENTS RECEIVED

One comment for the proposed rule was received on September 17, 2014 from Representative Brad Dee. Representative Dee was the sponsor of H.B. 124 in the 2013 Legislative Session. In his September 17, 2014 letter he stated the concern "*that some of the proposed rule changes may over reach the intent of H.B. 124 and place the State in a position for potential litigation.*" Representative Dee stated that he intends to run legislation during the upcoming 2015 session to clarify the division's role in performing the generator and broker site visits. He also requests the Board postpone any rulemaking action for proposed changes to R313-26 in order to allow for the legislative process to address this matter.

#### RECOMMENDATION

The Director of the Division of Radiation Control recommends that the Board act on Representative Dee's request and postpone rulemaking for R313-26 until after the conclusion of the 2015 Utah Legislative Session.

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

**NOTICE OF PROPOSED RULE**  
(Amendment)

DAR FILE NO.: 38771

FILED: 08/14/2014

**RULE ANALYSIS**

PURPOSE OF THE RULE OR REASON FOR THE CHANGE: As a result of the passage of H.B. 124, Radiation Control Amendments, during the 2013 General Legislative Session, an amendment was enacted that grants the director of the Utah Division of Radiation Control (DRC) discretion in issuing a generator or site access permit for access to a radioactive disposal site in Utah unless a generator or broker agrees to grant DRC reasonable access to its facilities for the verification of Utah requirements regarding radioactive waste classification. The proposed changes to Rule R313-26 are to change the rule so it is consistent with the Act, as well as identify the required shipment information and documentation, and clarify enforcement requirements.

SUMMARY OF THE RULE OR CHANGE: The proposed changes to Rule R313-26 would: 1) add a condition that those receiving a Radioactive Waste Generator Site Access Permit will be required to grant DRC reasonable access to its facilities. See Subsection R313-26-3(5); 2) require that prior to transport the permittee will provide DRC a copy of the Uniform Low Level Radioactive Waste Manifest for each shipment consigned for disposal within Utah. See Subsection R313-26-4(1); 3) require that Waste Processors, Waste Collectors, and other Waste Brokers include information accompanying the Radioactive Waste Manifest that documents the waste's originating generator name(s), the Low-Level Radioactive Waste compact affiliation, and the state or nation of origin. See Subsection R313-26-4(6); 4) require that shippers ensure that all waste arriving at a Low-Level Radioactive Waste facility in Utah will be secured tightly so that there is no waste material outside of the container, and the physical and containment integrity has not been compromised. See Subsection R313-26-4; and 5) clarification made to which enforcement requirements will apply to the rule. See Subsection R313-26-6.

STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE: Subsection 19-3-106.4(2)

ANTICIPATED COST OR SAVINGS TO:

◆ THE STATE BUDGET: It is expected that the Environmental Quality Restricted Account (EQRA) will be

affected by the proposed rule change. Fees for a Radioactive Waste Generator Site Access Permit are collected from out-of-state entities who wish to ship radioactive waste for disposal in Utah. The fees collected are placed into the EQRA. If DRC chooses to perform site visits of the permittee facilities, it is expected that the trip and associated costs will be paid for with EQRA funds.

◆ **LOCAL GOVERNMENTS:** No local governments hold a Generator Site Access Permit and therefore are not affected by the proposed rule changes.

◆ **SMALL BUSINESSES:** It is expected that out-of-state small businesses may be affected by this amendment. Many of those entities that receive a Radioactive Waste Generator Site Access Permit are small businesses. They will be required to grant DRC reasonable access to their facility. Any costs associated with allowing on-site access are expected to be minimal. Because a permittee already provides an advance copy of the shipping manifest and related information to the disposal facility, any costs to provide the same information to DRC will be minimal. Failure to grant access may affect the status of their permit, which may have a financial cost.

◆ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** It is expected that some individuals and/or corporations may be affected by this amendment. There are individuals and/or corporations that have a Radioactive Waste Generator Site Access Permit. They will be required to grant DRC reasonable access to their facility. Any costs associated with allowing on-site access are expected to be minimal. Because a permittee already provides an advance copy of the shipping manifest and related information to the disposal facility, any costs to provide the same information to DRC will be minimal. Failure to grant access may affect the status of their permit, which may have a financial cost.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** Entities that possess a Radioactive Waste Generator Site Access Permit will be required to grant DRC reasonable access to its facilities. Any costs associated with allowing on-site access are expected to be minimal. Because a permittee already provides an advance copy of the shipping manifest and related information to the disposal facility, any costs to provide the same information to the DRC will be minimal. Failure to grant access may affect the status of their permit, which may have a financial cost.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** If the proposed rule is promulgated, entities that possess a Radioactive Waste Generator Site Access Permit will be required to grant DRC reasonable access to its facilities. Any costs associated with allowing on-site access are expected to be minimal. Because a permittee already provides an advance copy of the shipping manifest and related information to the disposal facility, any costs to provide the same information to DRC will be minimal. Failure to grant access may affect the status of their permit, which may have a financial cost.

THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:

ENVIRONMENTAL QUALITY  
RADIATION CONTROL  
THIRD FLOOR  
195 N 1950 W  
SALT LAKE CITY, UT 84116-3085  
or at the Division of Administrative Rules.

DIRECT QUESTIONS REGARDING THIS RULE TO:

◆ Craig Jones by phone at 801-536-4264, by FAX at 801-533-4097, or by Internet E-mail at cwjones@utah.gov  
◆ Gwyn Galloway by phone at 801-536-4258, by FAX at 801-533-4097, or by Internet E-mail at ggalloway@utah.gov  
◆ Spencer Wickham by phone at 801-536-0082, by FAX at 801-533-4097, or by Internet E-mail at swickham@utah.gov

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS NO LATER THAN AT 5:00 PM ON 10/01/2014

THIS RULE MAY BECOME EFFECTIVE ON: 10/21/2014

AUTHORIZED BY: Rusty Lundberg, Director

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**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 meaning 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.~~

~~(e)]~~ 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) ~~A~~ ~~[Waste Generators, Waste Processors and Waste Collectors]~~ 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 [a]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 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 permits**

**Date of Enactment or Last Substantive Amendment: [September 22, 2011]2014**

**Notice of Continuation: April 6, 2011**

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

HOUSE OF REPRESENTATIVES  
STATE OF UTAH

REPRESENTATIVE  
BRAD DEE  
MAJORITY LEADER  
DISTRICT 11  
DAVIS AND WEBER COUNTIES



111 W. 5600 S.  
WASHINGTON TERRACE, UTAH 84405  
HOME (801) 479-5495  
WORK (801) 399-8623  
e-mail: bdee@le.utah.gov

September 17, 2014

Mr. Rusty Lundberg  
Utah Division of Radiation Control  
195 North 1950 West  
Salt Lake City, Utah 84114-4850



Re: Radiation Control Rules

Dear Mr. Lundberg:

The Radiation Control Board is seeking comment on several proposed rule changes. As indicated in our previous conversation on this matter I have concern that some of the proposed rule changes may over reach the intent of HB 124 and place the State in a position for potential litigation. As the Sponsor of HB 124 in the 2013 session, I believe it would be best for the legislature to specifically address changes to R313-26-3(5). As the sponsor of HB124 it was never the intent to supersede existing Federal and State regulatory oversight. As written, R313-26-3(5) has the potential to create a burden on other state's licensees which is not within the scope of the Division of Radiation Control. I have heard from waste generators in other states who have made it clear that they will not use Utah services if these inspections are performed as it puts them at risk. As such, I intend to run legislation during the upcoming 2015 session to simplify the statutory language and to further clarify the Division's role in performing these inspections. Historically speaking these types of "clarifying" or "clean up" bills have a high success rate. With that in mind I respectfully request that the State of Utah, Division of Radiation Control Board postpone action on R313-26 until I have had a chance to bring this back before my legislative colleagues. On Wednesday September 17th, I spoke with Amanda Smith about my intent to clarify this language in the upcoming session, she was receptive and welcomed the effort to address any ambiguities in the present statute.

Thank you again for this opportunity to comment.

Sincerely,

A handwritten signature in blue ink, appearing to read "Brad Dee".

Representative Brad Dee

## UTAH RADIATION CONTROL BOARD

October 14, 2014

### ADMINISTRATIVE RULEMAKING

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

#### **RULEMAKING PROCESS**

At the August 12, 2014 Board meeting, Ms. Laura Lockhart presented information concerning substantive changes regarding public participation procedures for licensing uranium mills and radioactive byproduct material management, per 42 U.S.C. §2021(o)(3). Ms. Lockhart requested that the proposed changes to R313-17-4 be approved for rulemaking and public comment. She explained that the proposed rule describes procedures regarding public participation for uranium mills and disposal of byproduct material licensees. The Board approved the filing of this rule with the Division of Administrative rules and directed staff to give notice to the public for a 30-day comment period. The proposed rule changes were published in the September 1, 2014 issue of the *Utah State Bulletin*.

On September 2, 2014, Division staff issued a List Server notice that invited the Public to submit comments on R313-70 from September 2, 2014 through October 1, 2014. Additional information about the opportunity to submit comments was provided on the Division's website.

#### **COMMENTS RECEIVED**

Comments from two commenters were submitted and received during the public comment period. Responses to the comments are being prepared, but are not completed.

#### **RECOMMENDATION**

The Director recommends that the Board provide additional time to respond to comments and take up this action during the November Board meeting, either as a final adoption of the proposed changes or as a change to the proposed rule based on the comments.

**UTAH RADIATION CONTROL BOARD**  
**October 14, 2014**

**ADMINISTRATIVE RULEMAKING**

**R313-24. Uranium Mills and Source Material Mill Tailings**  
**Disposal Facility Requirements**  
**R313-24-1. Purpose and Authority**

**RULEMAKING PROCESS**

At the August 12, 2014 Board meeting, Ms. Laura Lockhart presented information concerning changes to R313-24-1 that reference procedures and statutory requirements, regarding public participation procedures for licensing uranium mills and radioactive byproduct material management, per 42 U.S.C. §2021(o)(3). Ms. Lockhart requested that the proposed changes to R313-24-1 be approved for rulemaking and public comment. She explained that the changes in this rule make reference to procedures found in rule R313-17-4 regarding public participation for uranium mills and byproduct material disposal licensees. The Board approved the filing of this rule with the Division of Administrative rules and directed staff to give notice to the public for a 30-day comment period. The proposed rule changes were published in the September 1, 2014 issue of the *Utah State Bulletin*.

On September 2, 2014, Division staff issued a List Server notice that invited the Public to submit comments on R313-24-1 from September 2, 2014 through October 1, 2014. Additional information about the opportunity to submit comments was provided on the Division's website.

**COMMENTS RECEIVED**

No comments were submitted regarding the proposed changes to R313-24-1.

**RECOMMENDATION**

Although no comments were submitted for this proposed rulemaking, but as a companion rulemaking with the proposed changes for R313-17-4, the Director recommends that the Board consider final action on the proposed changes to R3131-24-1 concurrently with the proposed changes with R313-17-4 during the November Board meeting.

**Environmental Quality, Radiation  
Control  
R313-17-4  
Special Procedures for Decisions  
Associated with Licenses for Uranium  
Mills and Disposal of Byproduct  
Material**

**NOTICE OF PROPOSED RULE**

(Amendment)

DAR FILE NO.: 38770

FILED: 08/14/2014

**RULE ANALYSIS**

**PURPOSE OF THE RULE OR REASON FOR THE CHANGE:** The rule adds a new administrative hearing procedure that applies to specific licensing actions involving certain radioactive material licenses. The new hearing procedure is being added to ensure that the Division of Radiation Control (DRC) is in compliance with the requirements of 42 USC Section 2021(o)(3)(A)(ii), a requirement that must be met in order for the State of Utah to remain compatible with NRC as an Agreement State authorized to regulate uranium mills and disposal of byproduct materials. 42 USC Section 2021(o)(3)(A)(ii) requires Agreement States to provide an opportunity for cross-examination during a licensing proceeding. Previously, DRC met this requirement through procedures under the Utah Administrative Procedures Act (UAPA). However, under Section 19-1-301.5 (enacted in 2012), UAPA no longer applies to DRC licensing procedures. DRC is therefore required to provide a hearing procedure by rule.

**SUMMARY OF THE RULE OR CHANGE:** 42 USC Section 2021(o)(3)(A)(ii) requires NRC Agreement States to provide an opportunity for cross-examination for licensing actions involving uranium mills and disposal of byproduct materials. Legislative history for the provision clarifies that the procedures may be informal. Consistent with the legislative history and the informal procedures used for DRC licensing actions under Section 19-1-301.5, the DRC is proposing to use an informal question and answer hearing to meet this requirement. The proposed rule ensures that this hearing opportunity will be available to interested persons, as required by federal law, and outlines the procedures that will be used for the hearing.

**STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** 42 USC Section 2021 (o)(3)(A)(ii) and Section 19-1-301 and Section 19-1-301.5 and Subsection 19-3-104(4)

**ANTICIPATED COST OR SAVINGS TO:**

◆ **THE STATE BUDGET:** DRC anticipates some costs for implementing these procedures. However, these costs will be

billed to the licensee through fees associated with the radioactive material license. In addition, exactly how many licensing actions will take place during a state fiscal year is unknown, therefore additional costs to DRC cannot be determined at this time. However, it is anticipated that administrative costs not otherwise paid by the licensee will increase in implementing these procedures.

◆ **LOCAL GOVERNMENTS:** No local governments have a byproduct disposal facility or uranium mill license, so therefore local governments are not affected by this rule.

◆ **SMALL BUSINESSES:** DRC does not anticipate small businesses to be affected by this amendment, because no small businesses are licensees or operate a byproduct disposal facility or uranium mill.

◆ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** Individuals, tribes, and not for profit public or private organizations will be affected by increased travel costs to prepare for, participate in, and be present at these hearings. In order to properly record and transcribe the public hearings, such hearings will be held in Salt Lake City. The procedures provide an opportunity for the public to ask questions regarding the licensing action at the hearing. However, it is indeterminate how often or if the person or entity will want to attend and ask questions, therefore DRC cannot estimate how a person or entity will be affected. If they do attend, then travel costs may impact these stakeholders.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** Compliance costs for the affected person will increase because the licensee must prepare for and attend these hearings. The hearings will be held in Salt Lake City, and if the licensee's corporate offices are located in other states, travel costs associated with the hearings will affect them.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** The proposed rule ensures that the state provides an opportunity for a hearing for interested persons, as required by federal law, and outlines the procedures that will be used for the hearing. The proposed administrative procedures are to meet NRC Agreement State requirements in accordance with federal law found in 42 USC Section 2021(o)(3)(A)(ii). Fiscal impacts will be limited to two or three licensed facilities in Utah. How often a hearing is requested cannot be determined at this time. However, meeting administrative and travel costs will impact the licensee; by how much, depends on how many staff are in attendance and how often licensing actions are requested.

**THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:**

ENVIRONMENTAL QUALITY  
RADIATION CONTROL  
THIRD FLOOR  
195 N 1950 W  
SALT LAKE CITY, UT 84116-3085  
or at the Division of Administrative Rules.

## DIRECT QUESTIONS REGARDING THIS RULE TO:

- ◆ John Hultquist by phone at 801-536-4263, by FAX at 801-536-4250, or by Internet E-mail at [jhultquist@utah.gov](mailto:jhultquist@utah.gov)
- ◆ Rusty Lundberg by phone at 801-536-4257, by FAX at 801-533-4097, or by Internet E-mail at [rlundberg@utah.gov](mailto:rlundberg@utah.gov)

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS NO LATER THAN AT 5:00 PM ON 10/01/2014

THIS RULE MAY BECOME EFFECTIVE ON: 10/21/2014

AUTHORIZED BY: Rusty Lundberg, Director

**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. Section 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 hearing 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). Members 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.

**KEY: administrative procedures, comments, hearings, adjudicative proceedings**

**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(4); 19-1-301 and 19-1-301.5**

Environmental Quality, Radiation  
Control

**R313-24-1**

Purpose and Authority

**NOTICE OF PROPOSED RULE**

(Amendment)

DAR FILE NO.: 38769

FILED: 08/14/2014

**RULE ANALYSIS**

**PURPOSE OF THE RULE OR REASON FOR THE CHANGE:** The purpose of this proposed rulemaking is to reference the requirement described in Rule R313-17 that meets the requirement under 42 USC Section 2021(o)(3)(A)(ii) regarding certain licensing actions related to uranium mills and byproduct disposal facilities.

**SUMMARY OF THE RULE OR CHANGE:** The federal Atomic Energy Act (42 USC Section 2021(o)(3)(A)(ii)) requires Agreements States to include an opportunity for cross-examination as part of certain licensing actions related to 11e.(2) byproduct material. The proposed rulemaking references Rule R313-17 which contains procedural provisions required for uranium mill and byproduct disposal licensing actions.

**STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** 42 USC 20121(o)(3)(A)(ii) and Section 19-3-104 and Section 19-3-108

**ANTICIPATED COST OR SAVINGS TO:**

◆ **THE STATE BUDGET:** The Division of Radiation Control (DRC) anticipates some costs for implementing the procedures as described in Rule R313-17. However, these costs will be billed to the licensee through fees associated with their radioactive material license. In addition, exactly how many licensing actions will take place during a state fiscal year is unknown; therefore additional costs to the Division cannot be determined at this time. However, it is anticipated that administrative costs not otherwise paid by the licensee will increase in implementing these procedures.

◆ **LOCAL GOVERNMENTS:** No local governments have a byproduct disposal facility or uranium mill license, so therefore local governments are not affected by this rule.

◆ **SMALL BUSINESSES:** DRC does not anticipate small business to be affected by this amendment, because no small businesses are licensees or operate a byproduct disposal facility or uranium mill.

◆ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** Individuals, tribes, and not-for-profit public or private organizations will be affected by increased costs to prepare for, participate in and be present at these hearings. In order to properly record and transcribe the public hearings, such

hearings will be held in Salt Lake City. The procedures provide an opportunity for the public to ask questions regarding the licensing action at the hearing. However, it is indeterminate how often or if the person or entity will want to attend and ask questions, therefore DRC cannot estimate how a person or entity will be affected. If they do attend, then travel costs may impact these stakeholders.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** Compliance costs for the affected person will increase because the licensee must prepare for and attend these hearings. The hearings will be held in Salt Lake City, and if the licensee's corporate offices are located in other states, travel costs associated with the hearings will affect them.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** The proposed rule ensures that the state provides an opportunity for a hearing for interested persons, as required by federal law, and references the procedures that will be used for the hearing. The proposed administrative procedures are to meet NRC Agreement State requirements in accordance with federal law found in 42 USC Section 2021(o)(3)(A)(ii). Fiscal impacts will be limited to two or three licensed facilities in Utah. How often a hearing is requested cannot be determined at this time. However, meeting administrative and travel costs will impact the licensee; by how much, depends on how many staff are in attendance and how often licensing actions are requested.

THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:  
 ENVIRONMENTAL QUALITY  
 RADIATION CONTROL  
 THIRD FLOOR  
 195 N 1950 W  
 SALT LAKE CITY, UT 84116-3085  
 or at the Division of Administrative Rules.

**DIRECT QUESTIONS REGARDING THIS RULE TO:**  
 ♦ John Hultquist by phone at 801-536-4263, by FAX at 801-536-4250, or by Internet E-mail at [jhultquist@utah.gov](mailto:jhultquist@utah.gov)  
 ♦ Rusty Lundberg by phone at 801-536-4257, by FAX at 801-533-4097, or by Internet E-mail at [rlundberg@utah.gov](mailto:rlundberg@utah.gov)

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS NO LATER THAN AT 5:00 PM ON 10/01/2014

THIS RULE MAY BECOME EFFECTIVE ON: 10/21/2014

AUTHORIZED BY: Rusty Lundberg, Director

**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.

**KEY: environmental analysis, uranium mills, tailings, monitoring**  
**Date of Enactment or Last Substantive Amendment: [~~March 19,~~ 2013]2014**

**Notice of Continuation: May 24, 2012**

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



Energy Fuels Resources (USA) Inc.  
225 Union Blvd. Suite 600  
Lakewood, CO, US, 80228  
303 974 2140  
[www.energyfuels.com](http://www.energyfuels.com)

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October 1, 2014

John Hultquist  
Utah Division of Radiation Control  
195 N. 1950 W.  
Salt Lake City, UT 84116

**Re: Comments on R313-17-4: Special Procedures for Decisions Associated with Licenses for Uranium Mills and Disposal of Byproduct Material**

Dear Mr. Hultquist:

Energy Fuels Resources (USA) Inc. submits comments on proposed rule R313-17-4, entitled Special Procedures for Decisions Associated with Licenses for Uranium Mills and Disposal of Byproduct Material. Energy Fuels submits the following comments.

With regard to Paragraph (6), the phrase “are not used” is potentially too broad and arguably would allow the procedures to be invoked on appeal, even by a petitioner that did not use the procedures by their own inaction. For this reason, the language of paragraph (6) should be revised to make clear that if a petitioner fails to invoke or use the procedures in paragraphs (2) through (5) prior to taking an appeal, the petitioner is not entitled to invoke those procedures on appeal. One way the agency could consider accomplishing this is to revise paragraph (6) to add an additional sentence which reads: “However, this opportunity for questioning on appeal shall not be provided to a petitioner that fails to invoke or use the procedures in paragraphs (2) through (5) prior to taking the appeal.”

Best Regards,



**ENERGY FUELS RESOURCES (USA) INC.**  
David C. Frydenlund  
Senior Vice President, General Counsel and Corp Secretary

cc: Laura Lockhart ([llockhart@utah.gov](mailto:llockhart@utah.gov))

# Uranium Watch

76 South Main Street, # 7 | P.O. Box 344  
Moab, Utah 84532  
435-260-8384

October 1, 2014

via electronic mail

Laura Lockhart  
Utah Office of the Attorney General  
Environmental Division  
195 N 1950 W Fl South # 2  
Salt Lake City, UT 84116  
[llockhart@utah.gov](mailto:llockhart@utah.gov)

Re: Comments on: Department of Environmental Quality, Division of Radiation Control, Notice of Propose Rule. DAR FILE NO.: 38753. Amendments to Utah Administrative Code R305-7-607; Matters Governed by the Radiation Control Act, Title 19, Chapter 3, but not Including Section 19-3-109, *UTAH STATE BULLETIN*, September 01, 2014, Vol. 2014, No. 17, page 59.

Dear Ms. Lockhart:

Below please find comments by Uranium Watch regarding proposed changes to Utah Administrative Code R305-7-607.

The Proposed Rule R305-7-607 at (3)(a) states:

- (3) This paragraph (3) applies to proceedings under R313- 17-4(6).*
- (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).*

This Proposed Rule refers to hearing on licensing actions (permit orders) for uranium mills and 11e.(2) byproduct material that are required under the Atomic Energy Act (42 U.S.C. § 2021(o)(3)(A)). The pertinent AEA section reads:

In the licensing and regulation of byproduct material, as defined in section [2014 \(e\)\(2\)](#) of this title, or of any activity which results in the production of byproduct material as so defined under an agreement entered into pursuant to subsection (b) of this section, a State shall require—

\*\*\*

(3) procedures which—

(A) in the case of licenses, provide procedures under State law which include—

(i) an opportunity, after public notice, for written comments and a public hearing, with a transcript,

(ii) an opportunity for cross examination, and

(iii) a written determination which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review;

## COMMENT

The Proposed Rule fails to state that one of the purposes of the hearing is to receive public comments and evidence. The comments, questions, responses, and other evidence presented during the question and answer hearing and comment period are part of the record that the Division of Radiation Control must review and take into consideration when making a determination with respect a licensing action.

Therefore, the Rule should read (proposed language in bold):

*(3) This paragraph (3) applies to proceedings under R313-17-4(6).*

*(a) A hearing shall be conducted by the ALJ for the purposes of:*

**(i) Taking public comments and evidence;**

**(ii) 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 Director shall take the public comments and evidence from the hearing into consideration in the determination on the licensing action.**

*(f) The transcript of the hearing will be part of the record on appeal, as authorized in 19-1-301.5(8)(c)(vi).*

Thank you for providing this opportunity to comment.

Sincerely,

Sarah Fields  
Program Director  
[sarah@uraniumwatch.org](mailto:sarah@uraniumwatch.org)

cc: Rusty Lundberg, Director, Division of Radiation Control  
(electronic mail)

# Uranium Watch

76 South Main Street, # 7 | P.O. Box 344  
Moab, Utah 84532  
435-260-8384

October 1, 2014

via electronic mail

Rusty Lundberg  
Director  
Utah Division of Radiation Control  
P.O. Box 144850  
Salt Lake City, Utah 84114-4850  
[rlundberg@utah.gov](mailto:rlundberg@utah.gov)

Re: Comments on: Department of Environmental Quality, Division of Radiation Control, Notice of Propose Rule. DAR FILE NO.: 38770. Special Procedures for Decisions Associated with Licenses for Uranium Mills and Disposal of Byproduct Material, Utah Administrative Code R313-17-4. *UTAH STATE BULLETIN*, September 01, 2014, Vol. 2014, No. 17, page 95.

Dear Mr. Lundberg:

Herein please find comments by Uranium Watch regarding proposed changes to Utah Administrative Code R313-17-4.

Below is the proposed rule with suggested changes in bold, with additional comments in brackets:

*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. Section 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.*

**(d) "Written environmental analysis" means a written analysis of the impact of such license, including any activities conducted pursuant thereto, on the environment.**

**[This definition is in 42 U.S.C. § 2021(o)(3)(C). ]**

*(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 hearing 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) The written environmental analysis of the licensing action shall be available to the public before the notice of commencement of the public comment period and question and answer hearing opportunity.**

**[This is a requirement of 42 U.S.C. § 2021(o)(3)(C). ]**

*(c) Any person who proposed to ask questions during the question and answer hearing shall submit 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 the 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.*

*(d) 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.*

*(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.*

**(7) Construction cannot commence until the issuance of a written environmental analysis and the proceeding outlined in R313-17-4.**

**[This is a requirement of 42 U.S.C. § 2021(o)(3)(D). ]**

Thank you for providing this opportunity to submit comments on the draft DRC rule.

Sincerely,

Sarah M. Fields  
Program Director  
[sarah@uraniumwatch.org](mailto:sarah@uraniumwatch.org)

cc: John Hultquist, DRC

Rusty Lundberg/DRC  
October 1, 2014

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Laura Lockhart, Office of the Attorney General  
(electronic mail)

**UTAH RADIATION CONTROL BOARD**  
**October 14, 2014**

**PROPOSED RULE CHANGES**

**BOARD ACTION ITEM**

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

**RULEMAKING PROCESS**

At the August 12, 2014 Board meeting, Craig Jones presented information concerning substantive changes to the rules that address payments to the Division, license categories, and types of fees. He explained that the changes make technical corrections, add clarity, and specify the circumstances when the Director may renew an expired license. The Board approved the filing of this rule with the Division of Administrative rules and directed staff to give notice to the public for a 30-day comment period. The proposed rule changes for R313-70 were published in the September 1, 2014 issue of the *Utah State Bulletin*.

On September 2, 2014, Division staff issued a List Server notice that invited the Public to submit comments on R313-70 from September 2, 2014 through October 1, 2014. Additional information about the opportunity to submit comments was provided on the Division's website.

**COMMENTS RECEIVED**

No comments were submitted.

**RECOMMENDATION**

The Director recommends that the Board approve the final adoption of the changes to R313-70 and set an effective date of October 21, 2014.

**NOTICE OF PROPOSED RULE**

(Amendment)

DAR FILE NO.: 38751

FILED: 08/13/2014

**RULE ANALYSIS**

**PURPOSE OF THE RULE OR REASON FOR THE CHANGE:** The purposes for changing the rule include making technical corrections, adding clarity to the description of the time when registration fees are due, specifying when a delinquent fee may be transferred to the Office of State Debt Collection, and specifying the circumstances when the director may renew an expired license.

**SUMMARY OF THE RULE OR CHANGE:** As applicable, the descriptive terms "rule", "section", and "subsection" are added before each citation. The due date for x-ray registration fees is being changed from July 30 to a date specified by the director. This due date comports with Section R313-16-230. Provisions for transferring a delinquent account to the Office of State Debt Collection are added. These accounts include delinquent licensing, registration, and x-ray inspection fees. It is also proposed that the provisions for assessing late fees be deleted. Finally, the changes specify the circumstances that must be met for the director to renew an expired radioactive materials license.

**STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** Subsection 19-3-104(6)

**ANTICIPATED COST OR SAVINGS TO:**

◆ **THE STATE BUDGET:** The proposed changes include technical corrections that properly cite the Utah Administrative Code and these changes will not have an impact on the state budget. The deletion of the provisions for assessing late fees could result in a decrease in the state budget, but the amount is unknown. Since past due debts are referred to the Office of State Debt Collection and there are processing fees charged to collect the debt, it may be that the processing fees collected will exceed what could have been generated through assessing a late fee.

◆ **LOCAL GOVERNMENTS:** Since the proposed changes are meant to address technical corrections to citations of the Utah Administrative Code, there are no anticipated costs or savings to local government due to the technical corrections. A number of local government agencies are authorized to use radioactive materials or x-ray systems and, to date, there are no cases where a local government has been referred to the Office of State Debt Collection because of a delinquent account with the Division of Radiation Control.

◆ **SMALL BUSINESSES:** Since the proposed changes are meant to address technical corrections to citations of the Utah Administrative Code, there are no anticipated costs or savings to small business due to the technical corrections. However, if a small business has a delinquent account that is referred to the Office of State Debt Collection; it may be that the processing fees will be larger than the late fee that is proposed for deletion. The Division is not able to provide an estimate of the impact on a small business because the fee to

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Fees

process the debt is dependent on the initial amount of the delinquent account and the time it remains unpaid.

♦ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** Since the proposed changes are meant to accurately cite the Utah Administrative Code, there are no anticipated costs or savings to other persons due to the technical corrections. However, if other persons have a delinquent account that is referred to the Office of State Debt Collection, it may be that the processing fees will be larger than the late fee that is proposed for deletion. The Division is not able to provide an estimate of the costs incurred by other persons because the fee to process the debt is dependent on the initial amount of the delinquent account and the time it remains unpaid.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** There are no expected changes involving compliance costs associated with this rulemaking. Inspection intervals will not be changed.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** The proposed rule changes do not include any new fees or requirements for businesses and individuals possessing radioactive material or using x-ray machines in the state. Referring delinquent accounts to the Office of State Debt Collection may cause some business to incur a debt collection fee that is larger than the late fee that is proposed for deletion.

THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:

ENVIRONMENTAL QUALITY  
RADIATION CONTROL  
THIRD FLOOR  
195 N 1950 W  
SALT LAKE CITY, UT 84116-3085  
or at the Division of Administrative Rules.

DIRECT QUESTIONS REGARDING THIS RULE TO:

♦ Craig Jones by phone at 801-536-4264, by FAX at 801-533-4097, or by Internet E-mail at cwjones@utah.gov

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS NO LATER THAN AT 5:00 PM ON 10/01/2014

THIS RULE MAY BECOME EFFECTIVE ON: 10/21/2014

AUTHORIZED BY: Rusty Lundberg, Director

### **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 sources contained in devices used in industrial measuring systems, including x-ray fluorescence analyzers and neutron generators.	New License or Renewal Annual Fee
(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	New License or Renewal Annual Fee

calibration and reference sources.

(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 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.

Monthly fee for active or inactive mill Review Fees

(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

(d) Licenses for possession and use of source material for shielding.

New License or Renewal Annual Fee

(e) All other source material licenses.

New License or Renewal Annual Fee

(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

<p>(a)(ii) Other licenses for possession and use of radioactive material for processing or manufacturing of items containing radioactive material for commercial distribution.</p>	<p>New License or Renewal Annual Fee</p>	<p>(g) Licenses to distribute items containing radioactive material that require device review to persons exempt from the licensing requirements of <u>Rule R313-19</u>, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of <u>Rule R313-19</u>.</p>	<p>New License or Renewal Annual Fee</p>
<p>(b) Licenses authorizing the processing or manufacturing and distribution or redistribution of radio-pharmaceuticals, generators, reagent kits, or sources or devices containing radioactive material.</p>	<p>New License or Renewal Annual Fee</p>	<p>(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 <u>Rule R313-19</u>, except for specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of <u>Rule R313-19</u>.</p>	<p>New License or Renewal Annual Fee</p>
<p>(c) Licenses authorizing distribution or redistribution of radiopharmaceuticals, generators, reagent kits, or sources or devices not involving processing of radioactive material.</p>	<p>New License or Renewal Annual Fee</p>	<p>(i) Licenses to distribute items containing radioactive material that require sealed source or device review to persons generally licensed under <u>Rule R313-21</u>, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under <u>Rule R313-21</u>.</p>	<p>New License or Renewal Annual Fee</p>
<p>(d) Licenses for possession and use of radioactive material for industrial radiography operations.</p>	<p>New License or Renewal Annual Fee</p>	<p>(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 <u>Rule R313-21</u>, except specific licenses</p>	<p>New License or Renewal Annual Fee</p>
<p>(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).</p>	<p>New License or Renewal Annual Fee</p>		
<p>(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.</p>	<p>New License or Renewal Annual Fee</p>		
<p>(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.</p>	<p>New License or Renewal Annual Fee</p>		

authorizing redistribution of items that have been authorized for distribution to persons generally licensed under Rule R313-21.

(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 radioactive material for research and development which do not authorize commercial distribution. New License or Renewal Annual Fee

(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

receive or

dispose of the material.

(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 New License or Renewal

<p>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.                      (8) Civil Defense.                      (a) Licenses for possession and use of radioactive material for civil defense activities.                      (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.                      (10) General License.                      (a) Measuring, gauging and control devices as described in <u>Subsection R313-21-22(4)</u>, 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 <u>Section R313-19-30</u>, of a license issued by the U.S. Nuclear Regulatory Commission, an Agreement State or a Licensing State.</p>	Annual Fee	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.
	New License or Renewal Annual Fee	Podiatry	State Inspection Registration	Per tube. Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
	New License or Renewal Annual Fee	Veterinary	State Inspection Registration	Per tube. Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
	Fee per device	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.
	Fee per registration certificate	Industrial Facility with High or Very High Radiation Areas Accessible to Individuals	Registration	Annual per control unit and first tube plus annual per each additional tube connected to a control unit.
	Fee per registration certificate	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.
	Annual fee for license category listed in R313-70-7(1) through (10), per 180 days in one calendar [-----]year	Other	State Inspection Registration	Per tube. Annual per control unit and first

TABLE

**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.

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Acceptance of work, performed by a person meeting the qualifications in <u>Section R313-16-400</u> , 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.
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**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)**

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**UTAH RADIATION CONTROL BOARD**  
**October 14, 2014**

**PROPOSED RULE CHANGES**

**BOARD ACTION ITEM**

**R313-12, Definitions**

**R313-22, General Requirements for the Issuance of Specific Licenses**

**R313-25-2, Definitions**

**RULEMAKING PROCESS**

At the August 12, 2014 Board meeting, Craig Jones presented information concerning revision of definitions for terms used in Nuclear Regulatory Commission (NRC) regulations and Utah Administrative Code Sections R313-12-3, R313-22-33, and R313-25-2. He explained that the proposed changes are being made to reflect the changes made to Title 10 of the Code of Federal Regulations. Mr. Jones described the proposed revisions to the rules are necessary in order to maintain compatibility with the modified definitions for “construction” and “commencement of construction”. These compatibility requirements are described in NRC RATS ID-2011-2. As an Agreement State with the NRC, Utah is required to adopt these requirements by November 14, 2014.

The Board approved the filing of this rule with the Division of Administrative Rules and directed staff to give notice to the public for a 30-day comment period. The proposed changes were published in the September 1, 2014 issue of the *Utah State Bulletin*.

On September 2, 2014, Division staff issued a List Server notice that invited the public to submit comments concerning these rules from September 2, 2014 through October 1, 2014.

**COMMENTS RECEIVED**

No comments were submitted.

**RECOMMENDATION**

The Director recommends that the Board approve for final adoption the rule changes to Subsections R313-12-3, R313-22-33, and R313-25-2 and set an effective date of October 21, 2014.

**NOTICE OF PROPOSED RULE**

(Amendment)

DAR FILE NO.: 38752

FILED: 08/13/2014

**RULE ANALYSIS**

**PURPOSE OF THE RULE OR REASON FOR THE CHANGE:** The Nuclear Regulatory Commission (NRC) has revised Title 10 Code of Federal Regulations (10 CFR). NRC notified the Utah Division of Radiation Control (DRC) that the revised regulations need to be adopted by Agreement States no later than 11/14/2014. All Agreement States are required to maintain rules compatible with NRC regulations. The NRC revised the definitions of "Commencement of Construction" and "Construction". The Board proposes to revise the existing rules by incorporating the federal definitions found in 10 CFR Parts 30, 36, 40, 70, and 150.

**SUMMARY OF THE RULE OR CHANGE:** The rule will be amended by adding two definitions to Section R313-12-3. They will be listed in alphabetical order with the other definitions in that section.

**STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** Section 19-3-104

**ANTICIPATED COST OR SAVINGS TO:**

◆ **THE STATE BUDGET:** 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. See 76 FR 56961.

◆ **LOCAL GOVERNMENTS:** 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 the licensee including a local government that may have a radioactive material license. See 76 FR 56961.

◆ **SMALL BUSINESSES:** 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 that may also be a "small business". See 76 FR 56961.

◆ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** 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. See 76 FR 56961.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** The NRC performed a regulatory analysis of this amendment and determined that the rule change does not impose any new compliance burdens on licensees. See 76 FR 56961.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** Businesses with a radioactive material license will not see a fiscal impact due to the proposed changes to Rule R313-12-

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Environmental Quality, Radiation  
Control  
**R313-12-3**  
Definitions

3. The proposed changes do not add or remove significant requirements that affect the Radiation Control Program or the Utah Radiation Control Board.

THE FULL TEXT OF THIS RULE MAY BE INSPECTED,  
DURING REGULAR BUSINESS HOURS, AT:  
ENVIRONMENTAL QUALITY  
RADIATION CONTROL  
THIRD FLOOR  
195 N 1950 W  
SALT LAKE CITY, UT 84116-3085  
or at the Division of Administrative Rules.

DIRECT QUESTIONS REGARDING THIS RULE TO:  
♦ Mike Givens by phone at 801-536-0278, by FAX at 801-533-4097, or by Internet E-mail at mgivens@utah.gov

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON  
THIS RULE BY SUBMITTING WRITTEN COMMENTS NO  
LATER THAN AT 5:00 PM ON 10/01/2014

THIS RULE MAY BECOME EFFECTIVE ON: 10/21/2014

AUTHORIZED BY: Rusty Lundberg, Director

### **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  $3.7 \times 10^{10}$  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 ( $1000 \text{ mg/cm}^2$ ).

"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/cm<sup>2</sup>).

"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  $2.58 \times 10^{-4}$  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 cm<sup>2</sup>).

"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  $1.3 \times 10^5$  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

**SUMMARY OF THE RULE OR CHANGE:** The rule will be amended by deleting an obsolete definition for "Commencement of Construction" from Subsection R313-22-3(f). The revised definition will be listed in Section R313-12-3.

**STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** Section 19-3-104

**ANTICIPATED COST OR SAVINGS TO:**

◆ **THE STATE BUDGET:** 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. See 76 FR 56961.

◆ **LOCAL GOVERNMENTS:** 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 the licensee including a local government that may have a radioactive material license. See 76 FR 56961.

◆ **SMALL BUSINESSES:** 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 that may also be a "small business". See 76 FR 56961.

◆ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** 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. See 76 FR 56961.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** The NRC performed a regulatory analysis of this amendment and determined that the rule change does not impose any new compliance burdens on licensees. See 76 FR 56961.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** Businesses with a radioactive material license will not see a fiscal impact due to the proposed changes to Section R313-22-33. The proposed changes do not add or remove significant requirements that affect the Radiation Control Program, licensees, or the Utah Radiation Control Board.

**THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:**

ENVIRONMENTAL QUALITY  
RADIATION CONTROL  
THIRD FLOOR  
195 N 1950 W  
SALT LAKE CITY, UT 84116-3085  
or at the Division of Administrative Rules.

**DIRECT QUESTIONS REGARDING THIS RULE TO:**

◆ Mike Givens by phone at 801-536-0278, by FAX at 801-533-4097, or by Internet E-mail at [mgivens@utah.gov](mailto:mgivens@utah.gov)

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**Environmental Quality, Radiation  
Control  
R313-22-33  
General Requirements for the Issuance  
of Specific Licenses**

**NOTICE OF PROPOSED RULE**

(Amendment)

DAR FILE NO.: 38754

FILED: 08/13/2014

**RULE ANALYSIS**

**PURPOSE OF THE RULE OR REASON FOR THE CHANGE:** The Nuclear Regulatory Commission (NRC) has revised the definitions of "Commencement of Construction" and "Construction" in Title 10 of the Code of Federal Regulations (10 CFR). All Agreement States are required to maintain rules compatible with NRC regulations. The NRC notified the Utah Division of Radiation Control (DRC) that the revised regulations need to be adopted by Agreement States no later than 11/14/2014. The Utah Radiation Control Board proposes to revise the existing rules by adopting these definitions.

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS NO LATER THAN AT 5:00 PM ON 10/01/2014

THIS RULE MAY BECOME EFFECTIVE ON: 10/21/2014

AUTHORIZED BY: Rusty Lundberg, Director

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**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~~**

**Notice of Continuation: September 23, 2011**

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

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Environmental Quality, Radiation  
Control  
**R313-25-2**  
Definitions

**NOTICE OF PROPOSED RULE**

(Amendment)

DAR FILE NO.: 38755

FILED: 08/13/2014

**RULE ANALYSIS**

PURPOSE OF THE RULE OR REASON FOR THE CHANGE: The Nuclear Regulatory Commission (NRC) has revised the definitions of "Commencement of Construction" and "Construction" in Title 10 of the Code of Federal Regulations (10 CFR). All Agreement States are required to

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maintain rules compatible with NRC regulations. The NRC notified the Utah Division of Radiation Control (DRC) that the revised regulations need to be adopted by Agreement States, no later than 11/14/2014. The Utah Radiation Control Board proposes to revise the existing rules by adopting these definitions.

**SUMMARY OF THE RULE OR CHANGE:** The rule will be amended by deleting an obsolete definition for "Commencement of Construction" from Section R313-25-2. The revised definition will be in Section R313-12-3.

**STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** Section 19-3-104

**ANTICIPATED COST OR SAVINGS TO:**

◆ **THE STATE BUDGET:** 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. See 76 FR 56961.

◆ **LOCAL GOVERNMENTS:** 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 the licensee including a local government that may have a radioactive material license. See 76 FR 56961.

◆ **SMALL BUSINESSES:** 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 that may also be a "small business". See 76 FR 56961.

◆ **PERSONS OTHER THAN SMALL BUSINESSES, BUSINESSES, OR LOCAL GOVERNMENTAL ENTITIES:** 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. See 76 FR 56961.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** The NRC performed a regulatory analysis of this amendment and determined that the rule change does not impose any new compliance burdens on licensees. See 76 FR 56961.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** Businesses with a radioactive material license will not see a fiscal impact due to the proposed changes to Section R313-25-2. The proposed changes do not add or remove significant requirements that affect the Radiation Control Program, licensees, or the Utah Radiation Control Board.

THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:

ENVIRONMENTAL QUALITY  
RADIATION CONTROL  
THIRD FLOOR  
195 N 1950 W

SALT LAKE CITY, UT 84116-3085  
or at the Division of Administrative Rules.

**DIRECT QUESTIONS REGARDING THIS RULE TO:**

◆ Mike Givens by phone at 801-536-0278, by FAX at 801-533-4097, or by Internet E-mail at mgivens@utah.gov

**INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS NO LATER THAN AT 5:00 PM ON 10/01/2014**

**THIS RULE MAY BECOME EFFECTIVE ON: 10/21/2014**

**AUTHORIZED BY: Rusty Lundberg, Director**

**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**

**UTAH RADIATION CONTROL BOARD**  
**October 14, 2014**

**PROPOSED RULE CHANGES**

**UAC R313-19-2, 19-7, & 19-100, Requirements of General Applicability to  
Licensing of Radioactive Material**  
**UAC R313-37, Physical Protection of Category 1 and Category 2  
Quantities of Radioactive Material**

**INTRODUCTION**

On March 19, 2013, the U.S. Nuclear Regulatory Commission (NRC) published its final rule regarding the physical protection of byproduct material with an effective date of May 20, 2013. The rulemaking action created a new part, 10 CFR 37, and changes to the rules were required in parts 20, 30, 32, 33, 34, 35, 36, 39, 51, 71, and 73.

Agreement States are required to adopt similar rules within three years after the publication date of the final rule (i.e., by March 19, 2016). The Agreement States need to adopt similar rules as those adopted by the NRC so as to maintain compatibility and consistency of regulation between NRC and the Agreement States. The NRC has established compatibility categories for each of the rules to be adopted.

In reviewing the rule changes made by NRC, Division staff determined that changes needed to be made to Rule R313-19, and a new Rule, R313-37, needed to be created. Consistent with the Governor's directives, the Division is proposing that the Board incorporate by reference the requirements in 10 CFR 37 into the new Rule. The changes to Rule R313-19 involve the addition of a reference to R313-37 and a rewrite for clarification of R313-19-2, the addition of exemptions from licensing for common carriers in R313-19-7, and incorporating the changes in 10 CFR 71.97 by changing the publication year of the applicable regulations in 10 CFR 71 that are incorporated by reference in R313-19-100.

Included with this document and a copy of the proposed rules are two documents. One document is entitled "Justifications for not incorporating rules in RATS ID #2013-1 (Physical Protection of Byproduct Material)." This document explains why certain portions of the NRC rule changes are not recommended for adoption by the Board, and other information pertinent to the Division's incorporation by reference of the requirements in 10 CFR 37. The other document is entitled "Examples of Requirement Changes in R313-37," and describes many of the changes to the rules governing the protection of larger quantities of specific radioactive materials that differ from the requirements imposed on Utah Radioactive Material Licensees by the Director through License Conditions.

**RULEMAKING PROCESS**

If approved by the Board, this proposed rule will be published in the November 1, 2014 issue of the Utah State Bulletin, and comments will be accepted through December 1, 2014. The Division

will bring a recommended final action to the Board for its review during the December Board meeting.

**DIRECTOR'S RECOMMENDATION**

The Director 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.

**R313. Environmental Quality, Radiation Control.**

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

**R313-19-2. General.**

- (1) A person shall not manufacture, produce, receive, possess, use, transfer, own or acquire radioactive material except as authorized in a specific or general license issued pursuant to Rules R313-21 or R313-22 or as otherwise provided in Rule R313-19.
- (2) In addition to the requirements of Rules R313-19, R313-21 or R313-22, all licensees are subject to the requirements of Rules R313-12, R313-15, and R313-18. Licensees engaged in source material milling operations, authorized to possess byproduct material, as defined in Section R313-12-3 (see definition (b)) from source material milling operations, authorized to possess and maintain a source material milling facility in standby mode, authorized to receive byproduct material from other persons for disposal, or authorized to possess and dispose of byproduct material generated by source material milling operations are subject to the requirements of Rule R313-24. Licensees engaged in land disposal of radioactive material are subject to the requirements of Rule R313-25. Licensees using radioactive material in the healing arts are subject to the requirements of Rule R313-32. Licensees authorized to use sealed sources containing radioactive materials in panoramic irradiators with dry or wet storage of radioactive sealed sources, underwater irradiators, or irradiators with high dose rates from radioactive sealed sources are subject to the requirements of Rule R313-34. Licensees engaged in industrial radiographic operations are subject to the requirements of Rule R313-36. Licensees possessing category 1 or category 2 quantities of radioactive material, as defined in Section R313-37-3 (incorporating 10 CFR 37.5 by reference), are subject to the physical protection requirements of Rule R313-37. Licensees engaged in wireline and subsurface tracer studies are subject to the requirements of Rule R313-38. [Licensees authorized to use sealed sources containing radioactive materials in panoramic irradiators with dry or wet storage of radioactive sealed sources, underwater irradiators, or irradiators with high dose rates from radioactive sealed sources are subject to the requirements of Rule R313-34, licensees engaged in industrial radiographic operations are subject to the requirements of Rule R313-36, licensees using radionuclides in the healing arts are subject to the requirements of Rule R313-32, licensees engaged in land disposal of radioactive material are subject to the

~~requirements of Rule R313-25, and licensees engaged in wireline and subsurface tracer studies are subject to the requirements of Rule R313-38. Licensees engaged in source material milling operations, authorized to possess byproduct material, as defined in Section R313-12-3 (see definition (b)) from source material milling operations, authorized to possess and maintain a source material milling facility in standby mode, authorized to receive byproduct material from other persons for disposal, or authorized to possess and dispose of byproduct material generated by source material milling operations are subject to the requirements of Rule R313-24.]~~

**R313-19-7. Carriers.**

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in Rules R313-19, R313-21, R313-22, R313-32, R313-34, R313-36, R313-37, and R313-38 and the requirements for a license set forth in Subsection 19-3-104(3) to the extent that they transport or store radioactive material in the regular course of carriage for another or storage incident thereto.

**R313-19-100. Transportation.**

For purposes of Section R313-19-100, 10 CFR 71.0(c), 71.1(a), 71.3, 71.4, 71.13, 71.14(a), 71.15, 71.17, 71.19(a), 71.19(b), 71.19(c), 71.20 through 71.23, 71.47, 71.83 through 71.89, 71.97, 71.101(a), 71.101(b), 71.101(c) (1), 71.101(g), 71.105, 71.127 through 71.137, and Appendix A to Part 71 (2014) [~~(2010)~~] are incorporated by reference with the following clarifications or exceptions:

- (1) The exclusion of the following:
  - (a) In 10 CFR 71.4 the following definitions:
    - (i) "close reflection by water";
    - (ii) "licensed material";
    - (iii) "optimum interspersed hydrogenous moderation";
    - (iv) "spent nuclear fuel or spent fuel"; and
    - (v) "state."
- (2) The substitution of the following date reference:
  - (a) "October 1, 2011" for "October 1, 2008".
- (3) The substitution of the following rule references:
  - (a) "R313-36 (incorporating 10 CFR 34.31(b) by reference)" for "Sec. 34.31(b) of this chapter" as found in 10 CFR 71.101(g);
  - (b) "R313-15-502" for reference to "10 CFR 20.1502";
  - (c) "R313-14" for reference to "10 CFR Part 2 Subpart B";
  - (d) "Rule R313-32, 10 CFR Part 35," for reference to "10 CFR

part 35";

- (e) "R313-15-906(5)" for reference to "10 CFR 20.1906(e)";
- (f) "R313-19-100(5)" for "Sec.71.5";
- (g) "10 CFR 71.101(a), 71.101(b), 71.101(c)(1), 71.101(g), 71.105, and 71.127 through 71.137" for "subpart H of this part" or for "subpart H" except in 10 CFR 71.17(b), 71.20(b), 71.21(b), 71.22(b), 71.23(b);
- (h) "10 CFR 71.0(c), 71.1(a), 71.3, 71.4, 71.17(c)(2), 71.20(c)(2), 71.21(d)(2), 71.83 through 71.89, 71.97, 71.101(a), 71.101(b), 71.101(c)(1), 71.101(g), 71.105, and 71.127 through 71.137" for "subparts A, G, and H of this part";
- (i) "10 CFR 71.47" for "subparts E and F of this part"; and
- (j) "10 CFR 71.101(a), 71.101(b), 71.101(c)(1), 71.101(g), 71.105, and 71.127 through 71.137" for "Sec. Sec. 71.101 through 71.137."

(4) The substitution of the following terms:

- (a) "Director" for:
  - (i) "Commission" in 10 CFR 71.0(c), 71.17(a), 71.20(a), 71.21(a), 71.22(a), 71.23(a), and 71.101(c)(1);
  - (ii) "Director, Division of Nuclear Safety, Office of Nuclear Security and Incident Response" in 10 CFR 71.97(c)(1), and 71.97(f)(1);
  - (iii) "Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001" in 10 CFR 71.97(c)(3)(iii);
  - (iv) "NRC" in 10 CFR 71.101(f);
- (b) "Director, the U.S. Nuclear Regulatory Commission, or an Agreement State" for "Commission" in 10 CFR 71.3;
- (c) "The Governor of Utah" for:
  - (i) "the governor of a State" in 71.97(a);
  - (ii) "each appropriate governor" in 10 CFR 71.97(c)(1);
  - (iii) "the governor" in 10 CFR 71.97(c)(3);
  - (iv) "the governor of the state" in 10 CFR 71.97(e);
  - (v) "the governor of each state" in 10 CFR 71.97(f)(1);
  - (vi) "a governor" in 10 CFR 71.97(e);
- (d) "State of Utah" for "State" in 71.97(a), 71.97(b)(2), and 71.97(d)(4);
- (e) "the Governor of Utah's" for:
  - (i) "the governor's" in 10 CFR 71.97(a), 71.97(c)(3), 71.97(c)(3)(iii), 71.97(e), and 71.97(f)(1);
  - (ii) "governor's" in 10 CFR 71.97(c)(1), and 71.97(e);
- (f) "Specific or general" for "NRC" in 10 CFR 71.0(c);
- (g) "The Director at the address specified in R313-12-110" for reference to "ATTN: Document Control Desk, Director, Spent

Fuel Project Office, Office of Nuclear Material Safety and Safeguards" in 10 CFR 71.101(c)(1);

- (h) "Each" for "Using an appropriate method listed in Sec. 71.1(a), each" in 10 CFR 71.101(c)(1);
  - (i) "The material must be contained in a Type A package meeting the requirements of 49 CFR 173.417(a)." for "The fissile material need not be contained in a package which meets the standards of subparts E and F of this part; however, the material must be contained in a Type A package. The Type A package must also meet the DOT requirements of 49 CFR 173.417(a)." as found in 10 CFR 71.22(a) and 71.23(a);
  - (j) "Licensee" for "licensee, certificate holder, and applicant for a COC"; and
  - (k) "Licensee is" for reference to "licensee, certificate holder, and applicant for a COC are."
- (5) Transportation of licensed material
- (a) Each licensee who transports licensed material outside the site of usage, as specified in the license issued by the Director, the U.S. Nuclear Regulatory Commission or an Agreement State, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the U.S. Department of Transportation regulations in 49 CFR parts 107, 171 through 180, and 390 through 397 (2009), appropriate to the mode of transport.
    - (i) The licensee shall particularly note DOT regulations in the following areas:
      - (A) Packaging--49 CFR part 173: subparts A (49 CFR 173.1 through 49 CFR 173.13), B (49 CFR 173.21 through 49 CFR 173.40), and I (49 CFR 173.401 through 49 CFR 173.477).
      - (B) Marking and labeling--49 CFR part 172: subpart D (49 CFR 172.300 through 49 CFR 172.338); and 49 CFR 172.400 through 49 CFR 172.407 and 49 CFR 172.436 through 49 CFR 172.441 of subpart E.
      - (C) Placarding--49 CFR part 172: subpart F (49 CFR 172.500 through 49 CFR 172.560), especially 49 CFR 172.500 through 49 CFR 172.519 and 49 CFR 172.556; and appendices B and C.
      - (D) Accident reporting--49 CFR part 171: 49 CFR 171.15 and 171.16.
      - (E) Shipping papers and emergency information--49 CFR part 172: subparts C (49 CFR 172.200 through 49 CFR 172.205) and G (49 CFR 172.600 through 49 CFR 172.606).

- (F) Hazardous material employee training--49 CFR part 172: subpart H (49 CFR 172.700 through 49 CFR 172.704).
  - (G) Security plans--49 CFR part 172: subpart I (49 CFR 172.800 through 49 CFR 172.804).
  - (H) Hazardous material shipper/carrier registration--49 CFR part 107: subpart G (49 CFR 107.600 through 49 CFR 107.606).
- (ii) The licensee shall also note DOT regulations pertaining to the following modes of transportation:
- (A) Rail--49 CFR part 174: subparts A through D (49 CFR 174.1 through 49 CFR 174.86) and K (49 CFR 174.700 through 49 CFR 174.750).
  - (B) Air--49 CFR part 175.
  - (C) Vessel--49 CFR part 176: subparts A through F (49 CFR 176.1 through 49 CFR 176.99) and M (49 CFR 176.700 through 49 CFR 107.720).
  - (D) Public Highway--49 CFR part 177 and parts 390 through 397.
- (b) If DOT regulations are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of the DOT specified in paragraph (a) of this section to the same extent as if the shipment or transportation were subject to DOT regulations. A request for modification, waiver, or exemption from those requirements, and any notification referred to in those requirements, must be filed with, or made to, the Director, P.O. Box 144850, Salt Lake City, Utah 84114-4850.

**KEY: license, reciprocity, transportation, exemptions**

**Date of Enactment or Last Substantive Amendment: xxxxxx-xx-xxxx**

**Notice of Continuation: September 23, 2011**

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

R313. Environmental Quality, Radiation Control.

R313-37. Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material.

R313-37-1. Purpose and Authority.

- (1) The rules in R313-37 prescribe requirements for the physical protection program for a licensee that possesses an aggregated category 1 or category 2 quantity of radioactive material.
- (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 R313-37 are in addition to, and not in substitution for, the other requirements of these rules.

R313-37-2. Scope.

These requirements provide reasonable assurance of the security of category 1 and category 2 quantities of radioactive material by protecting these materials from theft or diversion. Specific requirements for access to material and, use, transfer, and transportation of material are included.

R313-37-3. Clarifications or Exceptions.

For purposes of R313-37, 10 CFR 37.5, 37.11(c), 37.21 through 37.43(d) (8), 37.45 through 37.103, and Appendix A to 10 CFR 37 (2014), are incorporated by reference with the following clarifications or exceptions:

- (1) The exclusion of the following:
  - (a) In 10 CFR 37.5, exclude definitions for "Act", "Agreement State", "Becquerel", "Byproduct Material", "Commission", "Curie", "Government Agency", "License", "License issuing authority", "Lost or missing licensed material", "Person", "State", and "United States";
  - (b) In 10 CFR 37.77, exclude the wording "Notifications to the NRC must be to the NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The notification to the NRC may be made by email to RAMQC SHIPMENTS@nrc.gov or by fax to 301-816-5151.";  
and
  - (c) In 10 CFR 37.81(g), exclude the wording "In addition, the licensee shall provide one copy of the written report addressed to the Director, Division of Security

Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.";

(2) The substitution of the following wording:

(a) "Utah Radiation Control Rule" for references to:

(i) "Commission regulation" in 10 CFR 37.101; and

(ii) "regulation" in 10 CFR 37.103;

(b) "Utah Radiation Control Rules" for reference to:

(i) "regulations and laws" in 10 CFR 37.31(d);

(ii) "Commission requirements" in 10 CFR 37.43(a) (3) and 37.43(c) (1) (i); and

(iii) "regulations in this part" in 10 CFR 37.103;

(c) "Director" for references to:

(i) "appropriate NRC regional office listed in Section 30.6(a) (2)" in 10 CFR 37.45(b);

(ii) "Commission" in 10 CFR 37.103;

(iii) "NRC" in 10 CFR 37.31(d), 37.43(c) (3) (iii), 37.57(a) and (c), 37.77, and 37.77(a) (1) [first instance] and (3);

(iv) "NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 29555-0001" in 10 CFR 37.77(c) (2) and 37.77(d);

(v) "NRC's Director of Nuclear Security, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 29555-0001" in 10 CFR 37.77(c) (1);

(vi) "NRC's Operations Center" in 10 CFR 37.81(a) and (b);

(vii) "NRC's Operations Center (301-816-5100)" in 10 CFR 37.57(a) and (b) and 37.81(a) through (f);

(viii) "NRC regional office listed in section 30.6(a) (2) of this chapter" in 10 CFR 37.41.(a) (3); and

(ix) "NRC regional office specified in section 30.6 of this chapter" in 10 CFR 37.41(a) (3);

(d) "Director, the U.S. Nuclear Regulatory Commission, or an Agreement State" for references to "Commission or an Agreement State" in 10 CFR 37.71 and 37.71(a) and (b);

(e) "U.S. Nuclear Regulatory Commission's Security Orders or the legally binding requirement issued by Agreement

- States" for references to "Security Orders" in 10 CFR 37.21(a)(3), 37.25(b)(2), and 37.41(a)(3);
- (f) "mail, hand delivery, or electronic submission" for references to "an appropriate method listed in section 37.7" in 10 CFR 37.57(c) and 37.81(g); and
- (g) "shall, by mail, hand delivery, or electronic submission," for reference to "shall use an appropriate method listed in section 37.7 to" in 10 CFR 37.27(c);
- (3) The substitution of the following rule references:
- (a) "R313-19-41(4)" for reference to "section 30.41(d) of this chapter."
- (b) "R313-19-100 [incorporating 10 CFR 37.97 by reference]" for reference to "section 71.97 of this chapter" in 10 CFR 37.73(b);
- (c) "R313-19-100 [incorporating 10 CFR 37.97(b) by reference]" for reference to "section 71.97(b) of this chapter" in 10 CFR 37.73(b); and
- (d) "10 CFR 73" for references to "part 73 of this chapter" in 10 CFR 37.21(c)(4), 37.25(b)(2), and 37.27(a)(4).

KEY: radioactive material, security, fingerprinting, transportation

Date of Enactment or Last Substantive Amendment: xxxxxxxx xx, xxxx

Notice of Continuation: None

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

# Justifications for not incorporating rules in RATS ID #2013-1 (Physical Protection of Byproduct Material)

## Justifications

### **Compatibility Category D:**

The following NRC rules were not incorporated by reference:

10 CFR 20.2201(c), 30.6(a), 30.33, 32.1(b), 33.1, 34.1, 35.1, 36.1(a), 37.1, 37.3, 37.7, 37.9, 37.11(a) & (b), 37.13, 37.105, 37.107, 37.109, and 39.1.

The reasons for not incorporating these rules are that there are no parallel Utah Division of Radiation Control Rules (rules) that need to be changed (e.g., changes to the Purpose and Scope of an NRC chapter), there are no equivalent rules to be changed (e.g., OMB approval), and the requirements are addressed in other rules (e.g., Inspections in R313-12-52, Violations and Civil Penalties in R313-14, etc...).

### **Compatibility Category D – Definitions:**

The following NRC definitions were not incorporated by reference into R313-37:

"Act," "Commission," "Government agency," "License," License issuing authority, "State," and "United States."

The reasons for not incorporating these definitions are that the definitions are already defined in the rules in R313-12-3 and that some the definitions are deemed to not be needed (e.g., "United States").

### **Compatibility Category NRC:**

The following NRC rules were not incorporated into reference:

10 CFR 37.43(d)(9), 37.77(f), 51.22, and 73.35.

The reason for not incorporating these NRC rules is because the changes are to regulations for which the NRC has sole jurisdiction (e.g., physical protection requirements for irradiated reactor fuel).

### **Compatibility Categories A, B, C, and H&S – Definitions:**

The following NRC definitions were not incorporated by reference into R313-37:

"Agreement State," "Becquerel," "Byproduct material," "Curie," "Lost or missing licensed material," and "Person."

The reason for not incorporating these definitions is that the definitions are already defined in the rules in R313-12-3. In the case of "Lost or missing licensed material," the rules have a definition for "Lost or missing source of radiation." The rules further define "source of radiation" to mean any radioactive material, or a device or equipment emitting or capable of producing ionizing radiation. The broader scope of the definition is needed since the Utah Division of Radiation Control also regulates the use of x-ray machine and particle accelerators.

**Other:**

Following a discussion of the matter with NRC, the Division determined that the appropriate substitute language for the phrase "regulations and laws" in 10 CFR 37.31(d) should be "Utah Radiation Control Rules." The purpose of the rule is to allow Division inspectors access to background investigation records for a licensee's personnel to determine compliance with the "regulations and laws." The Division only has authority to inspect for compliance with the rules promulgated under the Utah Radiation Control Act.

Based on information contained in the Federal Register Vol. 78, No. 53, dated March 19, 2013, the various notices and notifications that 10 CFR 37 indicates should be made to the NRC should instead be made to each Agreement States as part of the Agreement States' adoption of the requirements in 10 CFR 37. As a result, the substitute language for Utah's incorporation by reference of 10 CFR 37 will require Utah licensees to make all reports, including events, incidents, and advanced notices of shipments, to the Division Director. The Division will notify the NRC of all appropriate events, incidents, and advanced notification of shipments. The licensees will still be obligated to provide notices to governors or their designees in the cases where such notice is required.

In the Federal Register dated May 28, 2013, a correction was made to the email address in 10 CFR 37.77(a)(1). The portion of the rule where this email appears is listed in R313-37-3(1)(b) as an exclusion. Since Utah's incorporation by reference incorporates the 2014 version of 10 CFR 37, the wording of the excluded text includes the revised email address.

## Examples of Requirement Changes in R313-37

The information listed below is a representative list of examples to highlight some of the security requirements in R313-37 [incorporating 10 CFR 37 by reference], and does not include all of the requirements. Some of the examples in this list may already be familiar to licensees with License Conditions for security controls. The examples shown are only intended to highlight some of the areas where the security requirements are different from previously issued NRC security orders or Division issued License Conditions. **Licensees should carefully review the new security requirements in R313-37 [incorporating 10 CFR 37 by reference] and the implementation guidance in NUREG-2155 when developing their security programs.**

10 CFR Part 37: Physical Protection of Byproduct Material

<http://www.nrc.gov/reading-rm/doc-collections/cfr/part037/>

and

NUREG-2155: Implementation Guidance for 10 CFR Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material"

<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr2155/>

Examples of R313-37 Requirements:

### **Subpart A [10 CFR 37.1 – 37.13] - General Provisions**

-Aggregated definition: Accessible by the breach of a single physical barrier that would allow access to radioactive material in any form, including any devices that contain the radioactive material, when the total activity equals or exceeds a category 2 quantity of radioactive material.

-Reviewing official definition: The individual who shall make the trustworthiness and reliability determination of an individual to determine whether the individual may have, or continue to have, unescorted access to the category 1 or category 2 quantity of radioactive material, or the components of the security system. [Note: There will no longer be a "Trustworthy & Reliability (T&R) Official." See more information regarding the reviewing official in the Subpart B section.]

- Security Zone definition: Category 1 or category 2 material is used and stored in a permanent or temporary "security zone," which isolates material by the use of continuous physical barriers that allow access through only established access control points and/or through direct control of the security zone.

-A licensee that possesses radioactive waste that contains category 1 or category 2 quantities of radioactive material are exempt from the requirements in Sections 37.21 through 37.81, except for radioactive waste that contains discrete sources, ion-exchange resins, or activated material that weighs less than 2000 kg (4409 lbs). [Section 37.11(c). See Section 37.11(c)(1) – (4) for

the requirements to secure the excepted waste forms mentioned above. This requirement will likely only affect low-level radioactive waste disposal licensees.]

**Subpart B [10 CFR 37.21 – 37.33] - Background Investigations and Access Authorization Programs**

- Reviewing officials must undergo a background check and fingerprinting (for an FBI background check), and shall be recertified every 10 years. [Section 37.23(b)(2)]
- The reviewing official must be permitted unescorted access to category 1 or category 2 quantities of radioactive material or access to safeguards information or safeguards information-modified handling. [Note: Only one Utah licensee has records requiring safeguards information-modified handling.]
- Licensees must develop and maintain written procedures for implementing an access authorization program. [Section 37.23(f)]
- Licensees must obtain informed and signed consent before initiating a background investigation. [Section 37.23(c)] [Sample Consent Form can be obtained from NUREG 2155, Annex B, Page 111]
- Licensees must maintain a list of persons currently approved for unescorted access authorization. [Section 37.23(e)(5)]
- Licensee are to remove a person who no longer has unrestricted access to category 1 or category 2 quantities of radioactive material from the licensee's list of approved individuals as soon as possible, but no later than 7 working days following the revocation of unauthorized access. [Section 37.23(e)]
- Prior to any adverse determination, licensees shall provide each individual the right to complete, correct, and explain information obtained as a result of the licensee's background investigation. [Section 37.23(g)]
- The scope of investigation of an individual needing unescorted access to category 1 or category 2 quantities of radioactive material must encompass the 7 years preceding the date of the background investigation or since the individual's eighteenth birthday, whichever is shorter. [Section 37.25(a)]
- A background investigation must verify an individual's true identity using official documentation and compare that information to personal information that was provided. [Section 37.25(a)(2)]
- Licensees must document the type, expiration, and identification number of the identification document, or maintain a photocopy. [Section 37.25(a)(2)]

- Licensees must certify in writing that identification documentation was properly reviewed and maintain records for review during inspection. [Section 37.25(a)(2)]
- The verification of employment history, including military service, must include the most recent 7 years, or since 18th birthday, whichever is shorter. [Section 37.25(a)(3)]
- Individuals who are currently determined to be trustworthy and reliable (T&R) for unescorted access, are grandfathered, but are subject to the reinvestigation requirement. [Section 37.25(b)]
- Licensees must conduct a reinvestigation every 10 years for any individual with unescorted access to category 1 or category 2 quantities of radioactive material. The reinvestigation shall consist of fingerprinting and an FBI identification and criminal history records check in accordance with Section 37.27. The reinvestigations must be completed within 10 years of the date on which these elements were last completed. [Section 37.25(c)]
- Example of records required to grant unescorted access authorization [Sections 37.23 & 37.25]:
  - Verification of applicant's true identify
  - Signed background investigation consent form
  - Background investigation verifications including employment history (7 years), education (claimed period), character and reputation determination including developed references (no family personal references)
  - Fingerprint and criminal history record check
  - Documented basis
  - Security training
- Licensees need not subject to background screening elements prior to granting unescorted access to category 1 or category 2 quantities of radioactive material:
  - Commercial vehicle drivers for road shipments of category 2 quantities of radioactive material [Section 37.29(a)(10)], or
  - Service provider employees which the service provider licensee has conducted the background investigation and approved the individual for unescorted access. Written verification from the service provider must be provided to the licensee. [Section 37.29(a)(13)]
- Licensees shall ensure that access authorization programs are reviewed to confirm compliance with the rules, and that comprehensive actions are taken to correct any noncompliance that is

identified. The review shall be done periodically (at least annually), and records of the review shall be maintained by the licensee. [Section 37.39]

**Subpart C [10 CFR 37.41 – 37.57] - Physical Protection Requirements During Use**

- Licensees must be able to detect breaches through barrier walls. [Section 37.41(b). Further explained in NUREG-2155, Page 120, A-4.]
- Licensees shall develop and maintain a written **security plan** specific to its facilities and operations. The purpose of the security plan is to establish the licensee's overall security strategy to ensure the integrated and effective functioning of the security program required by sections 37.41 – 37.57. The security plan must, at a minimum:
  - (i) Describe the measures and strategies used to implement the requirements of sections 37.41 – 37.57; and
  - (ii) Identify the security resources, equipment, and technology used to satisfy the requirements of sections 37.41 – 37.57. [Section 37.43(a)]
- Licensees shall develop and maintain **written procedures** that document how the requirements of sections 37.41 - 37.57 and the security plan will be met. [Section 37.43(b)]
- Licensees shall conduct training to ensure that those individuals implementing the security program possess and maintain the knowledge, skills, and abilities to carry out their assigned duties and responsibilities effectively. [Section 37.43(c)(1)]
- Licensees shall conduct refresher training (on the licensees' security program) at least annually and when significant changes have been made to the security program. [Section 37.43(c)(3)]
- Licensees shall limit access and unauthorized disclosure of their security plan, implementing procedures, and the list of individuals that have been approved for unescorted access. [Section 37.43(d)(1)]
- Before granting an individual access to the security plan or implementing procedures, the licensee shall evaluate the individual's need to know the information. If the individual has not been granted unescorted access to category 1 or category 2 quantities of radioactive material, safeguards information, or safeguards information-modified handling, the licensee must complete a background investigation to determine the individual's trustworthiness and reliability. The background investigation shall include the elements in sections 37.25(a)(2) – 37.25(a)(7). [Section 37.43(d)(3)]
- Licensees need not subject security service provider employees to background screening elements required for access to sensitive information, provided the security provider provides written verification that the employee has been determined to be trustworthy and reliable, using the background investigation criteria in sections 37.25(a)(2) – 37.25(a)(7). [Section 37.43(d)(4)]

-Licensees must maintain a list of individuals approved for access to the security plan or implementing procedures. When an individual no longer needs access to the security plan or implementing procedures, the licensee shall remove the individual from the approved list as soon as possible, but no later 7 working days. [Section 37.43(d)(6)]

- Licensees must provide Local Law Enforcement Agency (LLEA) with:

- 1) A description of facility and security measures employed;
- 2) A description of category 1 or category 2 quantities of material possessed; and
- 3) Notification that the licensee will request a timely armed response in the event of an actual or attempted theft, sabotage, or diversion. [Section 37.45(a)]

- Licensees must coordinate with LLEA at least every 12 months, and maintain documentation of the efforts to coordinate for 3 years. [Sections 37.45(c) and (d)]

- Licensees must be able to continuously monitor and detect unauthorized entries into its security zones, including during the loss of primary power, or an alarm and response in the event of a loss of capability to monitor and detect unauthorized entries. [Section 37.49(a)]

-Licensees shall have a means to detect unauthorized removal of the radioactive material from the security zone.

- For category 1 quantities of radioactive material, immediate detection of any attempted removal of the radioactive material from the security zone, and
- For category 2 quantities of radioactive material, weekly verifications through physical checks, tamper indicating devices, use, or other means to ensure that the radioactive material is present. [Section 37.49(a)(3)]

- Licensees must implement a testing and maintenance program for intrusion alarms and tests at the manufacturer's recommended frequency, or at least annually, not to exceed 12 months. [Section 37.51(a)]

-There is no longer a distinction between "mobile" and "portable" devices containing category 1 or category 2 quantities of radioactive material. Section 37.53 addresses the security requirements for mobile devices (no more "portable" devices). [For more information on these requirements, see NUREG-2155, pages 191 & 192.]

- Licensees must periodically conduct, at least annually, a review of the licensee's security program content and implementation. [Section 37.55(a)]

-Licensees shall report to the Division all events related to the actual or attempted theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material, or

suspicious activity related to the possible theft, sabotage, or diversion of the material. [Section 37.57]

#### **Subpart D [10 CFR 37.71 through 37.81] - Physical Protection in Transit**

- Prior to transfer of a category 1 or category 2 source, licensees must verify that the recipient is authorized to receive the material using the NRC's License Verification System (LVS) or by contacting the license issuing authority of the recipient's license. [Section 37.71] [See the rules for license verification in R313-19-41(4).]

□ NRC's LVS can be accessed at: <http://www.nrc.gov/security/byproduct/ismp/lvs.html>

- For shipments of category 2 quantities of radioactive material that also meet the criteria in R313-19-100 [incorporating 10 CFR 71.97(b) by reference], licensees shall comply with the advance notification provisions of R313-19-100 [incorporating 10 CFR 71.97 by reference]. [Section 37.73(b)]

- For shipments containing a category 1 quantity of radioactive material, licensees shall preplan and coordinate with the receiving licensee, and provide advance notice to the Division and the governor or the governor's designated representative of any State through which the shipment will pass. [Sections 37.75(a) and 37.77]

□ The contact information, including telephone and mailing addresses, of governors and governors' designees, is available on the NRC's Web site at <http://nrc-stp.ornl.gov/special/designee.pdf>. A list of the contact information is also available upon request from the Director, Division of Intergovernmental Liaison and Rulemaking, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

- Licensees must coordinate shipment arrival and receiving times. Category 2 shipments must establish a "no later than" arrival time (date and time that the investigation will be initiated if package not received, and no later than 6 hours after the estimated arrival time for shipments of category 2 quantities of radioactive material). [Section 37.75(b)]

-Licensee shall comply with the requirements for physical protection of category 1 and category 2 quantities of radioactive material during shipment as addressed in Section 37.79.

-Licensees shall notify the LLEA and the Division of any lost or missing shipment of category 1 or category 2 quantities of radioactive material, or any actual or attempted theft, sabotage, or diversion of shipments containing this material. [Section 37.81]

#### **Appendix A to 10 CFR 37**

-Table 1 in Appendix A is different from the Table 1 referenced in the License Conditions previously issued by the Division in that the Appendix A Table 1 lists both category 1 and

category 2 quantities for the radionuclides of concern in both terabecquerels (TBq) and curies (Ci).

# UTAH RADIATION CONTROL BOARD

## PETITION FOR RULEMAKING GENERAL SUMMARY

### BACKGROUND

The Utah Administrative Rulemaking Act (UCA §63G-3-601) provides that an interested person/party may petition a rulemaking agency to make, amend, or repeal a rule. The Utah Administrative Code (UAC) establishes additional requirements for rulemaking petitions. (*See* UAC R15-2.)

### PETITION REQUIREMENTS

The petition must meet the following requirements:

- Include a statement that the proposed action of the petition is within the jurisdiction of the rulemaking agency and appropriate to the powers of the agency (UCA §63G-3-601(4));
- Send the petition to the head of the agency authorized to make the requested rule change;
- State the petitioner's name and the petitioner's interest in the rule, including relevant affiliation, if any; (UAC §R15-2-4)
- Provide the approximate wording of the requested rule change; (UAC §R15-2-4)
- Describe the reason for the rule change; (UAC §R15-2-4)
- Include an address, an E-mail address when available, and telephone where the petitioner can be reached during regular business hours; and (UAC §R15-2-4)
- Be signed by the petitioner. (UAC §R15-2-4)

### REQUIRED BOARD ACTIONS (UCA §63G-3-601(6), UAC §R15-2-3 and §R15-2-5)

If the petition is submitted to a board that has been granted rulemaking authority by the Legislature, the board shall:

- Within 45 days of the submission of the petition, place the petition on its agenda for review.
- Within 80 days of the submission of the petition, write a response to the petitioner stating either:
  - the petition is denied and the reasons for denial; or
  - the date when the Board is initiating rulemaking proceedings consistent with the intent of the petition;

- Retain the petition and a copy of the Board's response as part of the administrative record;
- Record the date the petition is received; and
- Mail copies of its decision to all persons who petitioned for a rule change.

Additionally, the Board may:

- Interview the petitioner;
- Hold a public hearing on the petition; or
- Take any action the agency, in its judgment, deems necessary to provide the petition due consideration.



September 29, 2014

Mr. Rusty Lundberg  
Director  
Utah Division of Radiation Control  
195 North 1950 West  
Salt Lake City, Utah 84414-4850

RE: Petition for Rulemaking – Amendments to UAC R313-28-31, R313-28-52 and R313-35.

Dear Mr. Lundberg,

Pursuant to Utah Code Ann. § 63G-3-601, Aribex Inc. hereby requests that the Radiation Control Board initiate rulemaking proceedings for the amendment of UAC R313-28-31, UAC R313-28-52 and R313-35 as explained in this letter. As we understand § 63G3-601, the board is required to place this agenda on its agenda for review and either initiate rulemaking proceedings or deny the petition in writing within 80 days of submittal of the petition.

This letter sets forth the statements of jurisdiction of the board to consider these proposed amendments as required by Utah Code Ann. § 63G3-601 and explains the basis for the proposed amendments.

The Aribex Portable hand held NOMAD MD device is designed to be used on all patients that require radiography and to be used safely hand held, by the operator, without a remote switch or mounting devices. We are requesting amendments to allow Portable hand held medical radiography in UAC R313-28-31 (5) and UAC R313-28-52(8)(b) and (i)(ii).

**Proposed amendments, Medical:**

Add the following language to recognize the use of hand held medical X-ray systems to Section R313-28-31.

Portable, Hand-Held Medical X-ray Systems.

(a) X-ray equipment designed to be hand-held shall comply with Section R313-28-31, excluding Subsection R313-28-31(5), and R313-28-52 excluding subsection R313-28-52(8)(b) and (i)(ii)

(b) Protective Aprons of at least 0.50 millimeter lead equivalence shall be provided for the operator to protect the operator's torso and gonads from backscatter radiation.

(c) In addition to the requirements of Subsection R313-28-350(1), each operator shall complete the training program supplied by the manufacturer prior to using the x-ray unit. Records of training shall be maintained on file for examination by an authorized

representative of the Director.

**Proposed amendments, Non-Medical Applications:**

Add a new sub-section, as well as the following language, to recognize and allow the use of portable, hand held, Non-Medical use X-ray systems to R313-35.

**R313-35-xxx Portable, Hand Held, Non-Medical X-ray systems**

1. In addition to compliance to the provisions of R313-35 and excluding R313-35-110(d), the following sections are specific to Portable, hand held, non-medical X-ray systems:

(a) Protective Aprons of at least 0.50 millimeter lead equivalence shall be provided for the operator to protect the operator's torso and gonads from backscatter radiation while operating the X-ray source.

(b) Each operator shall complete the training program supplied by the manufacturer prior to using the x-ray. Records of training shall be maintained on file for examination by an authorized representative of the Director.

**R313-35-2 Definitions addition:**

The addition of the definition of Forensic use of X-ray.

“Forensics X-ray” means the use of X-ray systems in forensic autopsies of deceased humans, Police agency use of X-ray for evidence identification /testing and X-ray system use for arson or questionable origin fire investigations.

Aribex medical X-ray devices are manufactured to the same standards for leakage radiation as our previous dental only devices; even with the higher power profile, leakage at the case is minimal and tested to the same level as our dental devices.

There are 2 differences in the new devices, when compared to our 60kV dental devices. The new devices do not employ a back scatter shield because the device is used pulled back from the subject which negates the effectiveness of having a scatter shield. The front gripping portion of the new device does have a shielded ring to protect the operators hands from scatter radiation. Aribex has tested and profiled the scatter radiation from the devices and the graphs are included in the presentation accompanying this letter. The scatter radiation from the devices is very low with the highest levels in the operator zone recorded at 28uGy hour, when using the machine at its full potential. Our testing shows scatter dissipation to unreadable levels at 165 CM from the source in typical applications which allows for safe operation in limited space areas.



744 South 400 East  
Orem, UT 84097 USA

Phone: 801-226-5522  
Fax: 801-434-7233

A detailed presentation is attached to this letter that includes safety testing data and an overview for the use of the devices.

We appreciate your consideration of our request for our proposed amendments and we would be happy to present the provided technical information in person.

Best Regards,

A handwritten signature in blue ink, appearing to read "Scott Hadden", is written over a faint, circular watermark.

Scott Hadden  
Product/Brand Manager  
Aribex Inc.  
Orem, Utah  
801-448-8101  
[shadden@aribex.com](mailto:shadden@aribex.com)

## **R313-28-31. General and Administrative Requirements.**

(1) Persons shall not make, sell, lease, transfer, lend, or install x-ray equipment or the accessories used in connection with x-ray equipment unless the accessories and equipment, when properly placed in operation and properly used, will meet the applicable requirements of these rules.

(2) The registrant shall be responsible for directing the operation of the x-ray machines which are under the registrant's administrative control. The registrant or registrant's agent shall assure that the requirements of R313-28-31(2)(a) through R313-28-31(2)(i) are met in the operation of the x-ray machines.

(a) An x-ray machine which does not meet the provisions of these rules shall not be operated for diagnostic purposes, when directed by the Director.

(b) Individuals who will be operating the x-ray equipment shall be instructed in the registrant's written radiation safety program and be qualified in the safe use of the equipment. Required operator qualifications are listed in R313-28-350.

(c) The registrant of a facility shall create and make available to x-ray operators written safety procedures, including patient holding and restrictions of the operating technique required for the safe operation of the x-ray systems. Individuals who operate x-ray systems shall be responsible for complying with these rules.

(d) Except for individuals who cannot be moved out of the room and the patient being examined, only the staff and ancillary personnel or other individuals needed for the medical procedure or training shall be present in the room during the radiographic exposure and shall be positioned as follows:

(i) individuals other than the patient shall be positioned so that no part of the body will be struck by the useful beam unless protected by not less than 0.5 mm lead equivalent material;

(ii) the x-ray operator, other staff, ancillary personnel and other individuals needed for the medical procedure shall be protected from primary beam scatter by protective aprons or barriers unless it can be shown that by virtue of distances employed, EXPOSURE levels are reduced to the limits specified in R313-15-201; and

(iii) patients who are not being examined and cannot be removed from the room shall be protected from the primary beam scatter by whole body protective barriers of not less than 0.25 mm lead equivalent material or shall be so positioned that the nearest portion of the body is at least two meters from both the tube head and nearest edge of the image receptor.

(e) For patients who have not passed reproductive age, gonad shielding of not less than 0.5 mm lead equivalent material shall be used during radiographic procedures in which the gonads are in the useful beam, except for cases in which this would interfere with the diagnostic procedure.

(f) Individuals shall be exposed to the useful beam for healing arts purposes only when the exposure has been specifically ordered and authorized by a licensed practitioner of the healing arts after a medical consultation. Deliberate exposures for the following purposes are prohibited:

(i) exposure of an individual for training, demonstration or other non-healing arts purposes; and

(ii) exposure of an individual for the purpose of healing arts screening except as authorized by R313-28-31(2)(i).

(g) When a patient or film must be provided with auxiliary support during a radiation exposure:

(i) mechanical holding devices shall be used when the technique permits. The written procedures, required by R313-28-31(2)(c), shall list individual projections where mechanical holding devices can be utilized;

(ii) written safety procedures, as required by R313-28-31(2)(c), shall indicate the requirements for selecting an individual to hold patients or films and the procedure that individual shall follow;

(iii) the individual holding patients or films during radiographic examinations shall be instructed in personal radiation safety and protected as required by R313-28-31(2)(d)(i);

(iv) Individuals shall not be used routinely to hold film or patients;

(v) In those cases where the patient must hold the film, except during intraoral examinations, portions of the body other than the area of clinical interest struck by the useful beam shall be protected by not less than 0.5 mm lead equivalent material; and

(vi) Facilities shall have protective aprons and gloves available in sufficient numbers to provide protection to personnel who are involved with x-ray operations and who are otherwise not shielded.

(h) Personnel monitoring. Individuals who are associated with the operation of an x-ray system are subject to the applicable requirements of R313-15.

(i) Healing arts screening. Persons proposing to conduct a healing arts screening program shall not initiate the program without prior approval of the Director. When requesting approval, that person shall submit the information outlined in R313-28-400. If information submitted becomes invalid or outdated, the Director shall be notified immediately.

(3) Maintenance of records and information. The registrant shall maintain at least the following information for each x-ray machine:

(a) model numbers of major components;

(b) record of surveys or calculations to demonstrate compliance with R313-15-302, calibration, maintenance and modifications performed on the x-ray machine; and

(c) a shielding design report for the x-ray suite which states assumed values for workload and use factors and includes a drawing of surrounding areas showing assumed values for occupancy factors.

(4) X-ray records. Facilities shall maintain an x-ray record containing the patient's name, the types of examinations, and the dates the examinations were performed. When the patient or film must be provided with human auxiliary support, the name of the human holder shall be recorded. The registrant shall retain these records for three years after the record is made.

(5) Portable or mobile equipment shall be used only for examinations where it is impractical to transfer the patient to a stationary radiographic installation.

(a) X-ray equipment designed to be hand-held shall comply with Section R313-28-31, excluding Subsection R313-28-31(5), and R313-28-52 excluding subsection[s] R313-28-52(8)(b) and (i) [and] (ii)

(b) Protective Aprons of at least 0.50 millimeter lead equivalence shall be provided for the operator to protect the operator's torso and gonads from backscatter radiation.

(c) In addition to the requirements of Subsection R313-28-350(1), each operator shall complete the training program supplied by the manufacturer prior to using the x-ray unit Records of training shall be maintained on file for examination by an authorized representative of the Director.

(6) Procedures and auxiliary equipment designed to minimize patient and personnel exposure commensurate with the needed diagnostic information shall be utilized.

(a) The speed of the screen and film combinations used shall be the fastest speed consistent with the diagnostic objective of the examinations. Film cassettes without intensifying screens shall not be used for routine diagnostic radiological imaging, with the exception of standard film packets for intra-oral use in dental radiography. If

the requirements of R313-28-31(6)(a) cannot be met, an exemption may be requested pursuant to R313-12-55.

(b) The radiation exposure to the patient shall be the minimum exposure required to produce images of good diagnostic quality.

(c) X-ray systems, other than fluoroscopic, computed tomography, dental or veterinary units, shall not be utilized in procedures where the source to patient distance is less than 30 centimeters.

## **R313-35-2. Definitions.**

As used in R313-35:

"Analytical x-ray system" means a group of components utilizing x-rays to determine the elemental composition or to examine the microstructure of materials by either x-ray fluorescence or diffraction analysis.

"Cabinet x-ray system" means an x-ray system with the x-ray tube installed in an enclosure, hereinafter termed "cabinet," which, independent of existing architectural structure except the floor on which it may be placed, is intended to contain at least that portion of a material being irradiated, provide radiation attenuation, and exclude personnel from its interior during generation of x-radiation. Included are all x-ray systems designed primarily for the inspection of carry-on baggage at airline, railroad and bus terminals, and similar facilities. An x-ray tube used within a shielded part of a building, or x-ray equipment which may temporarily or occasionally incorporate portable shielding is not considered a cabinet x-ray system.

"Collimator" means a device used to limit the size, shape and direction of the primary radiation beam.

"Direct reading dosimeter" means an ion-chamber pocket dosimeter or an electronic personal dosimeter.

"External surface" means the outside surfaces of cabinet x-ray systems, including the high-voltage generator, doors, access panels, latches, control knobs, and other permanently mounted hardware and including the plane across an aperture or port.

"Fail-safe characteristics" means design features which cause beam port shutters to close, or otherwise prevent emergence of the primary beam, upon the failure of a safety or warning device.

"Forensics X-ray" means the use of X-ray systems in forensic autopsies of deceased humans, Police agency use of X-ray for evidence identification / testing and X-ray system use for arson or questionable origin fire investigations.

"Nondestructive testing" means the examination of the macroscopic structure of materials by nondestructive methods utilizing x-ray sources of radiation.

"Non-medical applications" means uses of x-ray systems except those used for providing diagnostic information or therapy on human patients.

"Normal operating procedures" means instructions necessary to accomplish the x-ray procedure being performed. These procedures shall include positioning of the equipment and the object being examined, equipment alignment, routine maintenance by the registrant, and data recording procedures which are related to radiation safety.

"Open-beam configuration" means a mode of operation of an analytical x-ray system in which individuals could accidentally place some part of the body into the primary beam during normal operation if no further safety devices are incorporated.

"Portable package inspection system" means a portable x-ray system designed and used for determining the presence of explosives in a package.

"Primary beam" means ionizing radiation which passes through an aperture of the source housing via a direct path from the x-ray tube located in the radiation source housing.

"Very high radiation area" means an area, accessible to individuals, in which radiation levels could result in individuals receiving an absorbed dose in excess of five Gy (500 rad) in one hour at one meter from a source of radiation or from any surface that the radiation penetrates. At very high doses received at high dose rates, units of absorbed dose, gray and rad, are appropriate, rather than units of dose equivalent, sievert and rem.

"X-ray system" means an assemblage of components for the controlled production of x-rays. It includes, minimally, an x-ray high-voltage generator, an x-ray control, a tube housing assembly, and the necessary supporting structures. Additional components which function with the system are considered integral parts of the system.

### **R313-35-xxx. Portable, Hand Held, Non-Medical X-ray systems.**

- (1) In addition to compliance to the provisions of R313-35 and excluding R313-35-110(d), the following sections are specific to Portable, hand held, non-medical X-ray systems:

(a) Protective Aprons of at least 0.50 millimeter lead equivalence shall be provided for the operator to protect the operator's torso and gonads from backscatter radiation while operating the X-ray source.

(b) Each operator shall complete the training program supplied by the manufacturer prior to using the x-ray. Records of training shall be maintained on file for examination by an authorized representative of the Director.

# Aribex

The NOMAD 75kV is produced in 2 configurations.

The device on the left is used in Non-Human applications. Veterinary, Security, Inspection and Forensics. **NOMAD 75kV**

The device on the right is for Medical use and includes a cage to limit source to skin distance to 30cm (SSD)

## **NOMAD MD**

- The devices are rated at 75kV and 2mA fixed. The only adjustable parameter is the time. 20 ms to 990 ms
- The maximum SID field size, at 28", is 10" x 12"
- Operator will wear an apron with lead equivalent protection of .25mm or more, as well as a thyroid collar

**ARIBEX™**

**NOMAD M+**

# Aribex



The devices have been tested by Intertek Labs and have passed all of the designated criteria for the following IEC safety and usability requirements:

- IEC 60601-1 Ed 3 General safety and essential performance
- IEC 60601-2 EMI
- IEC 60601-1-3 Radiation Safety
- IEC 60825-1 Lasers
- IEC 60601-1-6 Usability
- IEC 62366 Usability
- IEC 60601-2-28 Safety of x ray source assemblies
- IEC 60601-2-54 Safety of x ray equipment for radiography
- ISO 14971 Risk Management
- Meets requirements of 21CFR 1020.30 and 1020.31

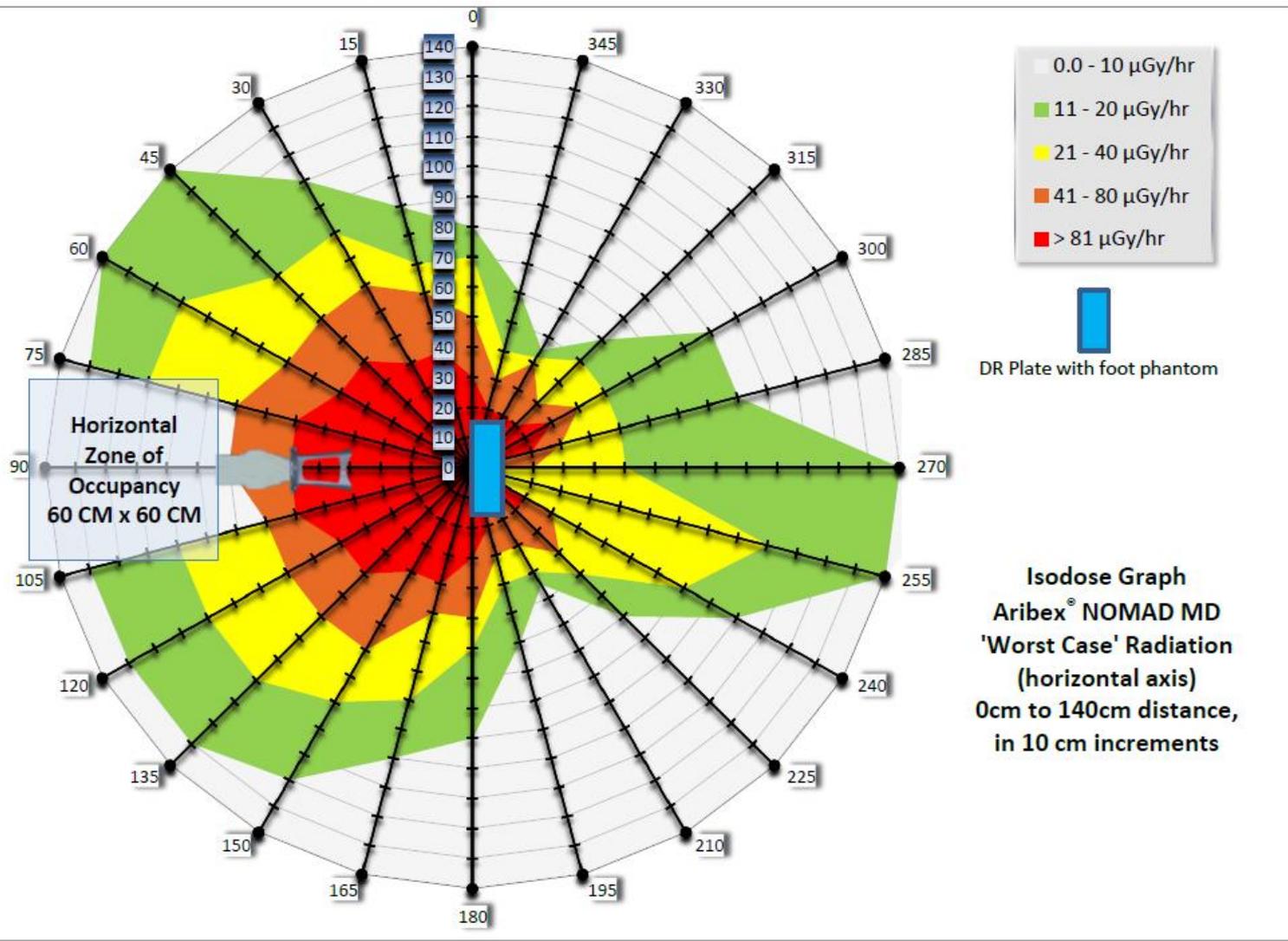


# Aribex Radiation Profiles

The next pages of information summarize scatter radiation and also what happens with a standard office wall with a direct beam striking it.



# Aribex Scatter Radiation Profile



# Aribex

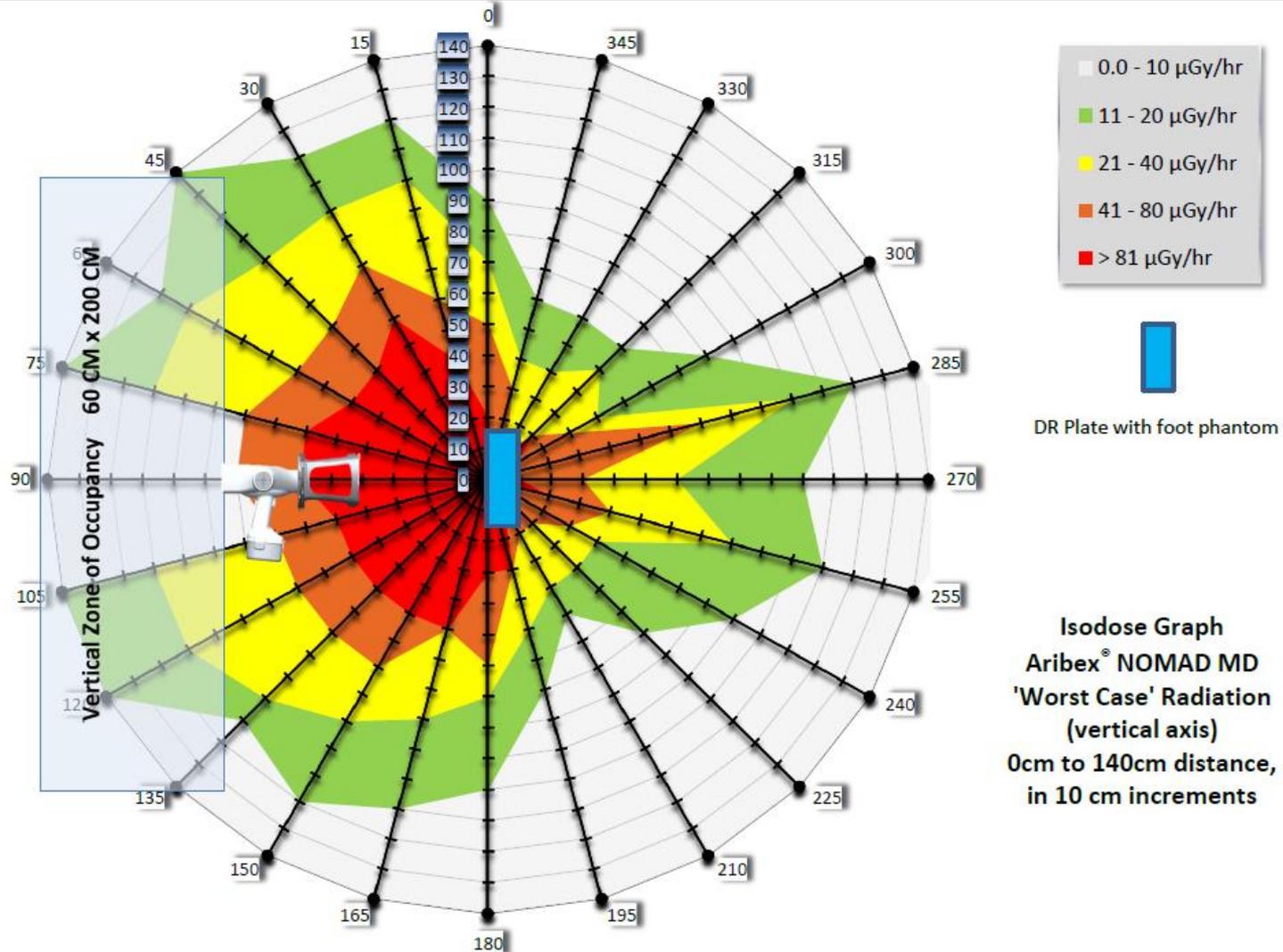
## Scatter Radiation Profile Raw Data Converted to uGy hr (Horizontal)

1 (10 CM)	5099.38	6785.51	13623.58	12656.48	12898.25	17796.86	18206.82	17865.18	11405.55	10717.01	2486.09	2049.84	1193.11	73.06	80.89	39.71	41.53	38.85	51.86	39.16	57.97	52.98	48.78	103.60
2 (20 CM)	421.53	394.04	387.32	2223.29	11862.82	18033.38	18075.42	13402.83	4882.83	461.85	398.30	344.58	381.85	278.88	78.31	93.29	116.89	35.46	45.51	94.66	76.42	112.48	108.80	381.59
3 (30 CM)	118.68	167.30	190.64	178.65	255.13	16756.16	18091.19	11352.98	291.71	221.75	185.33	157.10	141.60	77.05	49.10	55.66	60.18	34.93	36.79	61.65	93.87	53.87	50.98	50.77
4 (40CM)	78.31	108.80	123.62	125.20	158.21	3048.49	146.75	2785.69	184.33	184.33	115.63	91.66	71.17	30.36	21.09	43.62	30.36	34.10	29.09	35.37	55.19	28.40	62.59	26.07
5 (50CM)	46.54	64.02	78.63	88.67	120.78	242.72	129.88	246.87	126.14	96.66	79.94	62.23	40.93	15.44	9.82	28.70	26.33	35.59	23.98	22.61	35.20	24.25	9.04	19.24
6 (60 CM)	31.06	49.71	56.34	60.29	77.89	85.73	85.09	86.09	79.21	67.43	54.03	40.58	27.46	12.98	10.28	15.87	21.91	34.38	18.56	12.64	16.11	12.85	4.95	11.17
7 (70 CM)	25.21	31.43	43.65	44.47	50.92	59.08	63.55	47.23	47.57	48.53	42.46	30.72	19.42	9.03	6.63	11.31	15.59	32.97	16.31	15.91	15.24	6.87	0.00	7.18
8 (80CM)	13.51	23.60	31.05	30.85	35.83	41.53	46.16	39.15	39.12	36.73	30.83	22.40	17.39	8.95	0.00	6.11	23.97	23.59	13.95	14.32	14.31	7.84	0.00	5.17
9 (90 CM)	10.40	22.10	23.14	23.97	27.44	31.84	0.00	34.50	25.89	23.27	27.23	15.69	11.61	6.70	0.00	4.07	15.22	20.77	17.29	10.80	15.20	0.00	0.00	6.93
10 (100 CM)	7.89	13.64	15.57	21.00	26.91	25.63	0.00	26.41	22.22	20.95	16.23	14.74	10.43	7.99	0.00	4.07	12.54	21.07	11.43	6.86	8.30	4.96	0.00	5.38
11 (110 CM)	8.95	13.27	11.42	18.32	23.34	23.58	0.00	19.70	19.47	17.63	13.63	8.58	6.11	4.55	0.00	0.00	8.62	15.98	13.69	7.95	5.69	0.00	5.22	0.00
12 (120 CM)	6.13	10.21	10.22	15.76	18.73	18.90	0.00	14.53	17.84	15.66	12.00	8.71	6.09	0.00	0.00	0.00	6.45	12.43	10.27	4.16	6.62	0.00	0.00	0.00
13 (130 CM)	4.48	6.42	7.47	14.20	14.96	17.23	0.00	14.77	15.82	11.12	6.99	6.39	3.21	0.00	0.00	0.00	3.93	17.80	12.24	5.65	5.17	0.00	0.00	0.00
14 (140 CM)	0.00	5.43	5.26	11.73	11.49	10.35	0.00	9.94	9.78	9.95	6.82	5.97	0.00	0.00	0.00	0.00	6.00	15.12	11.81	0.00	0.00	0.00	0.00	0.00
Degrees	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345

Data represented as points on a 360 degree grid, segmented to 15 degree slices. Each 15 degree sliced is segmented out to 140 CM in 10 CM increments.



# Aribex Scatter Radiation Profile



# Aribex

## Scatter Radiation Profile Raw Data Converted to uGy Hr (Vertical)

1 (10 CM)	904.03	1518.99	2596.47	13071.70	14664.27	15610.35	16530.16	17449.96	11668.35	1172.09	1145.81	745.83	921.90	148.75	55.71	72.95	93.40	93.35	88.30	84.78	85.67	82.36	78.79	132.19
2 (20 CM)	355.83	374.75	394.73	472.36	4047.13	11694.63	17502.52	13087.47	6811.79	4835.53	371.07	376.86	361.09	56.24	44.23	78.16	81.57	45.27	52.67	70.54	95.61	52.34	38.79	80.84
3 (30 CM)	74.11	178.70	193.42	216.92	258.81	2591.21	18290.92	3101.05	260.17	258.60	193.95	199.15	158.73	57.45	40.02	35.62	60.55	43.64	42.66	67.75	57.76	29.45	40.08	63.07
4 (40CM)	72.01	111.95	117.16	138.76	171.66	243.98	153.00	222.22	171.35	140.34	124.99	66.96	78.84	35.15	20.89	29.63	24.54	42.14	36.90	57.45	27.38	27.30	21.12	25.34
5 (50CM)	47.59	78.84	81.63	93.50	120.78	211.13	135.82	171.35	132.45	101.97	84.25	49.49	50.99	26.43	13.87	18.81	18.70	37.30	27.49	53.87	16.06	23.24	15.41	17.07
6 (60 CM)	31.33	57.03	81.31	67.70	69.69	84.31	83.20	68.28	72.17	71.22	62.65	32.11	50.76	18.39	7.53	9.98	19.47	33.48	24.57	48.12	13.57	15.26	11.54	13.56
7 (70 CM)	24.13	39.85	55.61	48.68	47.57	46.11	62.49	46.99	56.50	49.35	44.27	23.91	32.40	13.17	6.44	11.33	12.68	33.04	19.52	47.69	14.30	6.81	5.27	9.83
8 (80CM)	16.24	26.78	45.38	31.61	34.15	40.76	51.26	38.11	37.15	36.69	30.60	21.98	18.05	9.90	5.96	6.05	9.56	26.25	16.50	38.64	15.79	7.32	5.73	6.46
9 (90 CM)	17.50	21.95	31.12	30.43	28.94	34.79	0.00	32.91	30.85	27.12	24.18	16.73	14.89	4.20	6.00	5.88	11.51	18.95	14.18	27.48	8.31	0.00	0.00	5.62
10 (100 CM)	9.62	22.54	24.07	21.34	24.85	27.59	0.00	20.68	26.65	20.76	20.12	14.68	15.10	9.19	4.20	5.62	7.94	17.28	13.35	21.91	8.11	0.00	0.00	0.00
11 (110 CM)	5.94	13.56	19.39	19.08	23.26	25.21	0.00	21.48	21.65	18.34	19.53	12.35	7.54	6.22	0.00	4.19	6.53	13.06	8.85	16.91	5.62	0.00	5.22	0.00
12 (120 CM)	5.94	11.25	16.34	16.07	16.11	18.76	0.00	18.11	12.55	9.43	12.58	6.66	6.18	5.51	0.00	0.00	0.00	9.38	9.83	13.70	7.24	0.00	0.00	0.00
13 (130 CM)	4.36	5.01	8.72	14.45	9.89	14.31	0.00	12.45	14.61	9.21	9.83	5.36	4.26	0.00	0.00	0.00	5.71	4.64	0.67	7.91	0.00	0.00	0.00	0.00
14 (140 CM)	0.00	3.95	4.45	11.46	9.62	11.10	0.00	12.19	12.29	7.93	5.26	4.80	4.12	0.00	0.00	0.00	0.00	0.00	5.98	3.89	0.00	0.00	0.00	0.00
Degrees	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345

Data represented as points on a 360 degree grid, segmented to 15 degree slices. Each 15 degree sliced is segmented out to 140 CM in 10 CM increments.



# Aribex



## NOMAD MD

Test Summary, Direct Beam Into wall 990 MS, Worst Case Radiation pass through test. 2"x 4" wall, 1/2" standard sheetrock. (2 sheets)  
Fluke TNT 12000D with Ion Chamber, Auto Calibration.



Front of Wall  
Entry point



Back of wall  
measurement

	Point of Entry, measured from source	Radiation Measurement, from opposite side of wall.	
		mR/uR	uGy
	30 CM	27.34 mR	237.7 uGy
	40 CM	19.41 mR	168.8 uGy
	50 CM	14.62 mR	127.1 uGy
	60 CM	10.02 mR	87.13 uGy
	70 CM	7.87 mR	68.43 uGy
	80 CM	6.25 mR	54.35 uGy
	90 CM	5.89 mR	51.22 uGy
	100 CM	5.06 mR	44.0 uGy
	110 CM	4.19 mR	36.43 uGy
	120 CM	3.55 mR	30.87 uGy
	130 CM	3.01 mR	26.17 uGy
	140 CM	2.60 mR	22.61 uGy
	150 CM	2.31 mR	20.09 uGy
	160 CM	2.00 mR	17.39 uGy
	170 CM	1.78 mR	15.48 uGy
	180 CM	1.60 mR	13.91 uGy
	190 CM	1.44 mR	12.52 uGy
	200 CM	1.29 mR	11.22 uGy
	210 CM	1.13 mR	9.82 uGy
	220 CM	985 uR	8.56 uGy
	230 CM	929 uR	8.07 uGy
	240 CM	862 uR	7.49 uGy
	250 CM	789 uR	6.86 uGy



# Aribex

Possible operator dose per number of annual exposures compared to recommended occupational limits from scatter radiation.

*\* Note \* This is presented as dose without a lead vest and thyroid collar, that Aribex recommends be used with this device.*



uSv          mSv          Sv

Estimated operator dose based upon number of exposures

	uSv	mSv	Sv
0	0	0.00	0.00000000
100	2609	2.61	0.00260900
200	5218	5.22	0.00521800
300	7827	7.83	0.00782700
1800	46962	46.96	0.04696200
1900	49571	49.57	0.04957100
2000	52180	52.18	<b>0.05218000</b>
2100	54789	54.79	<b>0.05478900</b>
5600	146104	146.10	<b>0.14610400</b>
5700	148713	148.71	<b>0.14871300</b>
5800	<b>151322</b>	<b>151.32</b>	<b>0.15132200</b>
5900	<b>153931</b>	<b>153.93</b>	<b>0.15393100</b>
6000	<b>156540</b>	<b>156.54</b>	<b>0.15654000</b>
6100	<b>159149</b>	<b>159.15</b>	<b>0.15914900</b>
6200	<b>161758</b>	<b>161.76</b>	<b>0.16175800</b>

	uSv	mSv	Sv
Dosimetry Requirement	5000	5.00	<b>0.00500000</b>
Whole body limit	50000	50.00	0.05000000
<b>Eye limit</b>	<b>150000</b>	<b>150.00</b>	<b>0.15000000</b>
Per individual exposure	26	0.03	0.00002609



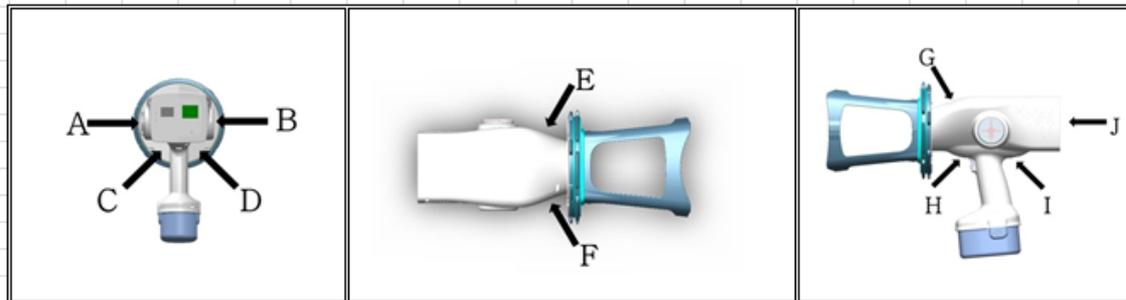
# Aribex



Leakage radiation from the device measured at the case. 10 sample points on the device as indicated.

Product S/N: 0	X-ray Module S/N: 48	Product ID: Wrong Product ID	Radiation Leakage Meter: Fluke 1911
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## Radiation Leakage Test



A	B	C	D	E	F	G	H	I	J
6.00	3.00	8.00	6.00	10.00	4.00	11.00	15.00	3.00	0.00
$\mu\text{R}$									
0.003	0.002	0.004	0.003	0.006	0.002	0.006	0.008	0.002	0.000
$\text{mGy}/\text{Hr}$									

What unit of measure will you be using for this radiation leakage test?

$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$
$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$	<b>MAX</b> 0.008	$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$
$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$	$\text{mGy}/\text{Hr}$

Fluke 1911  $\mu\text{R}$  Selected



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

(FSME-14-095, October, Other, Merger)

October 3, 2014

ALL AGREEMENT STATES  
AND NON-AGREEMENT STATES  
STATE LIAISON OFFICERS  
NATIVE AMERICAN TRIBAL LEADERS  
GOVERNOR DESIGNEES FOR  
ADVANCE NOTIFICATIONS

**THE MERGING OF THE OFFICES OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS (NMSS) AND FEDERAL AND STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS (FSME) (FSME-14-095)**

**Purpose:** To inform State stakeholders and Tribal Leaders of the NMSS and FSME reorganization. The merger of NMSS and FSME will be effective on October 5, 2014.

**Background:** The U.S. Nuclear Regulatory Commission's (NRC) workload has ebbed and flowed in response to a multitude of factors. Over the years, NMSS went through several structural changes to address its workload changes. For example, in 2006, the NRC restructured NMSS, moving some of its programs, including the state and tribal programs, into a new office (FSME). NMSS retained fuel cycle facilities, high-level waste disposal, spent fuel storage, and radioactive material transportation. FSME was responsible for the Agreement State Program, the Tribal and Environmental Liaison Program, and for regulating industrial, commercial and medical uses of radioactive materials and uranium recovery activities. Also FSME handled the decommissioning of previously operating nuclear facilities and power plants.

The NRC's materials and waste management workload has now shifted again. Therefore NRC staff launched a working group last fall to review the organizational structure of the NRC's materials and waste management programs. With the focus shifting to long-term waste storage and disposal strategies, and an increasing number of nuclear plants moving to decommissioning, the group recommended merging FSME's programs back to NMSS. The NRC's Commissioners approved the proposal in July 2014 and the merger of the two offices is effective October 5, 2014.

**Discussion:** The new NMSS will consist of four technical divisions and a Directorate to address Yucca Mountain activities. An organization chart is included as Enclosure 1.

The four technical divisions are:

- Division of Material Safety, State, Tribal, and Rulemaking Programs. Combines the functions of FSME's Divisions of Intergovernmental Liaison and Rulemaking and Materials Safety and State Agreements. This division will consist of six branches.
- Division of Spent Fuel Management. Contains all branch functions from NMSS's Division of Spent Fuel, Storage, and Transportation and adds the Long term Spent Fuel Management Branch from NMSS's Division of Spent Fuel Alternative Strategies. This division will consist of six branches.

- Division of Fuel Cycle Safety, Safeguards, and Environmental Review. Contains the branch functions from NMSS's Division of Fuel Cycle Safety and Safeguards and adds the environmental project management function from FSME's Division of Waste Management and Environmental Protection. The division will consist of five branches.
- Division of Decommissioning, Uranium Recovery, and Waste Programs. Contains the branch functions from FSME's Division of Waste Management and Environmental Protection related to decommissioning reactor and materials facilities, licensing associated with uranium recovery, and low-level waste disposal. This division will consist of five branches.

The Regional State Liaison Officers and the Regional State Agreements Officers are not changing with the reorganization. However, under the reorganization, two branches - Intergovernmental Liaison branch and the Rulemaking and Project Management branch that were previously under the Division of Intergovernmental Liaison & Rulemaking - will report to me as the Director of the Division of Material Safety, State, Tribal, and Rulemaking Programs (MSTR). Current work, functions, and responsibilities at the staff level will be largely unchanged.

The previous FSME letters will become State and Tribal Communications (STC) letters. The Radiation Control Program Director (RCPD) letters will remain unchanged. Staff will be working to update the NRC's websites and procedures to reflect the merger without impacting our stakeholders.

We firmly believe that this reorganization will better position the NRC to meet our mission. We remain committed to ensuring that, while organizational changes are occurring, we will continue to closely coordinate with your organization and its members to ensure our focus remains on the national materials program and our liaison activities with Federal, Tribal and State partners.

If you have any questions regarding this correspondence, please contact me at 301-415-3340 or the individual named below.

POINT OF CONTACT: Duncan White  
TELEPHONE: (301) 415-2598

INTERNET: [Duncan.White@nrc.gov](mailto:Duncan.White@nrc.gov)  
FAX: (301) 415-5955

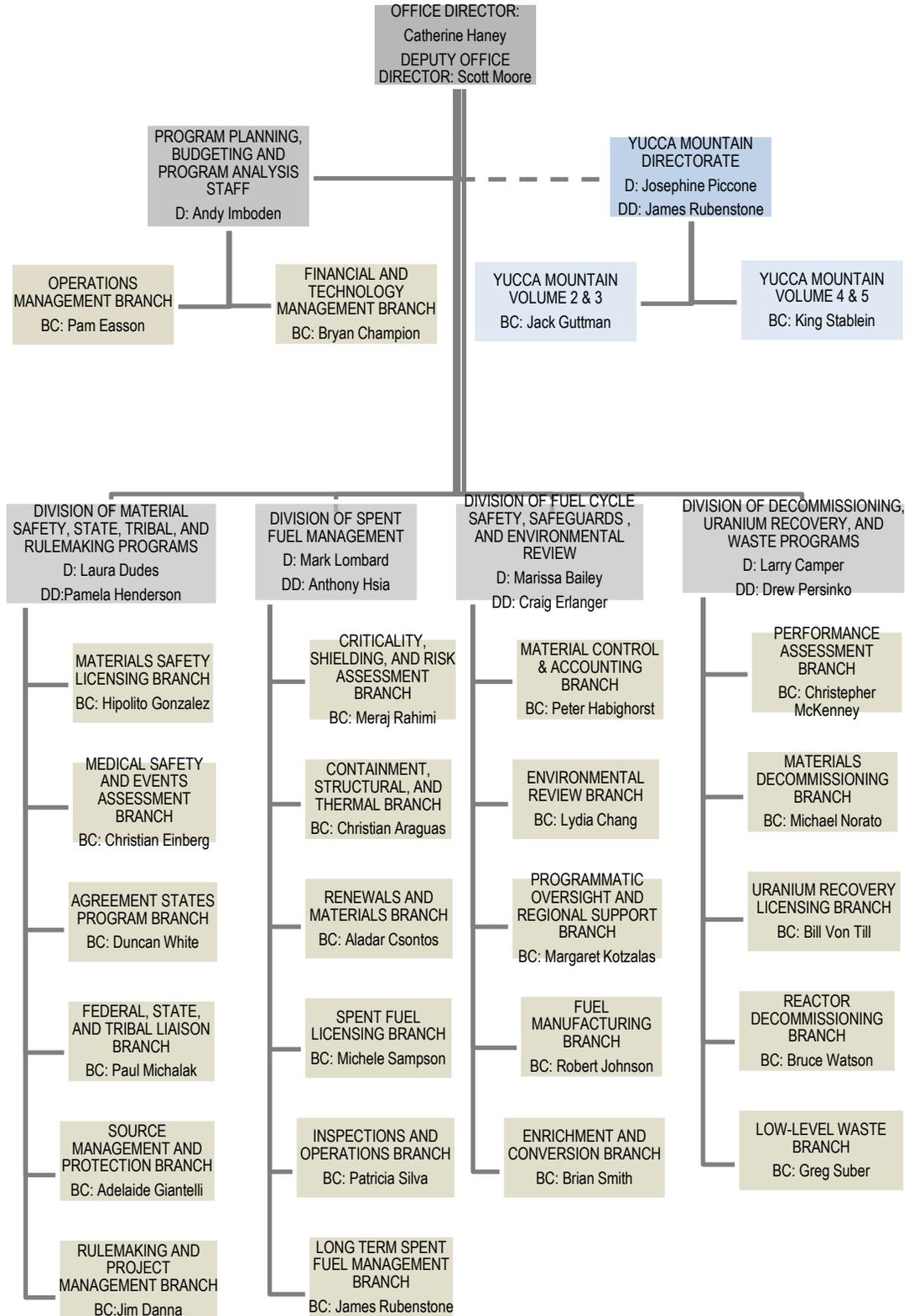
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Laura A. Dudes, Director  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials  
and Environmental Management Programs

Enclosure: Organization Chart

# Office of Nuclear Material Safety and Safeguards

## Organization Chart – Effective October 5, 2014



September 17, 2014

**DRC-2014-005407**

CD14-0210  
**RECEIVED**  
SEP 18 2014  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

Mr. Rusty Lundberg  
Director  
Utah Division of Radiation Control  
P.O. Box 144850  
Salt Lake City, UT 84114-4850

Subject: Radioactive Material License #UT 2300249 – Request for Extension of  
Variance to Receive and Dispose of Sealed Sources

Dear Mr. Lundberg:

In a letter dated April 11, 2012, the Director granted a variance to License Condition 16A to allow limited sealed source disposal at Clive in support of the U.S. Department of Energy, National Nuclear Security Administration Global Threat Reduction Initiative. As described below, more time is needed to receive the final shipment of this waste. *EnergySolutions* hereby requests an extension to the variance in order to receive this final shipment.

The variance approval described an expiration date one year (365 days) from receipt of the first shipment. The first shipment was received on September 30, 2013; therefore, the variance expires on September 30, 2014. In order for the Threat Reduction Initiative to meet its goals, one more shipment is required; however, that shipment will not be received at the Clive Facility until after September 30, 2014. The shipment is expected to be sent to the *EnergySolutions* Bear Creek facility over the next two-three weeks and then will require two-three weeks to process to the requirements of the variance and ship to Clive.

Based on this information, and to ensure enough time is given to properly prepare and ship this final shipment of sealed sources, *EnergySolutions* requests the variance be extended to November 14, 2014.

Should there be any questions regarding this request, please contact myself or Vern Rogers at 801-649-2000.

Sincerely,



Timothy L. Orton, P.E.  
Environmental Engineer and Manager

cc: John Hultquist, DRC  
Phil Goble, DRC



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

September 29, 2014

Daniel B. Shrum  
Senior Vice President, Regulatory Affairs  
EnergySolutions, LLC  
423 West 300 South, Suite 200  
Salt Lake City, Utah 84101

Subject: Response to Request to Extend the Variance to Receive and Dispose of Sealed Sources, Radioactive Materials License #UT 2300249, License Condition 16A

Dear Mr. Shrum:

In a letter dated September 17, 2014 (CD14-0210), EnergySolutions requests an extension to the license variance issued on April 11, 2012 for the purpose of receiving and disposing of sealed sources. Based on the receipt of the initial shipment at the Clive facility, the existing variance approval expires on September 30, 2014.

A one-year variance of license condition 16A of EnergySolutions' radioactive materials license was granted to allow for the receipt and disposal of sealed radioactive sources collected under the auspices of the Conference of Radiation Control Program Directors' (CRCPD) national sealed source collection program (Source Collection and Threat Reduction or SCATR). This program is funded by the U.S. Department of Energy, National Nuclear Security Administration's Global Threat Reduction Initiative (GTRI). Both SCATR and GTRI's source recovery programs are instrumental in contributing to national security by safeguarding disused sealed sources that exist throughout the country and serve as a viable option for the final disposition of these sources.

As noted in the extension request, there remains an additional shipment that is currently undergoing preparations for staging and packaging for the eventual shipment to the Clive facility. Additionally, we have been contacted by the SCATR program coordinator to inform us that the collection for a third and final shipment is nearly complete and will be packaged for shipment to the Bear Creek facility with an anticipated arrival date at Clive that potentially could be after the requested extension date of November 14, 2014.

Based on the information we have received regarding the remaining shipments of sealed sources that have been or are in the final stages of being collected under the SCATR program, the request to extend the expiration date of the license variance is granted. Also, in recognition of the potential need to account for the additional logistical and administrative matters for the final

Daniel B. Shrum  
September 29, 2014  
Page 2

shipment to Clive, the variance to license condition 16A is extended to and will expire on December 31, 2014. All other previous approval conditions for this variance remain in place and are not suspended or superseded by this approval to extend the expiration date.

We appreciate the level of coordination and the collective effort of all those involved with this project as a means to contribute to and ensure the security of disused sealed sources.

Please contact me if you have any questions regarding this approval.

Sincerely,



Rusty Lundberg  
Director

cc: Russ Meyer, CRCPD SCATR Program Coordinator  
Abigail Cuthbertson, DOE NNSA  
Vern Rogers, EnergySolutions



# ENERGY *SOLUTIONS*

## Erwin Resin *Solutions*, LLC Update

Troy Eshleman

Vice President, Waste Processing

*Energy Solutions*

October 2014

- Update on existing SEMPRASAFE/Erwin Resin*Solutions* operations
- Update on Performance Assessment submitted to DRC for review
- Questions from the Utah Radiation Control Board Members

# Erwin Facility Update



- EnergySolutions acquired Studsvik's THOR® process and Erwin Facility in March 2014
- SEMPRASAFE, LLC has been consolidated into EnergySolutions Logistics Processing and Disposal Business Unit
- The Erwin resin processing facility is now called Erwin ResinSolutions
- Erwin ResinSolutions continues to offer full service resin processing and disposal services to the US Nuclear Power Industry

# Erwin Resin*Solutions*



Erwin Resin*Solutions* safely and compliantly operates under a Radioactive Material License issued by the Tennessee Department of Environment and Conservation (TDEC) Department of Radiological Health (TDRH) (license initially issued in 1996)



- Resins as-received from generators are processed for a variety of reasons:
  - Reduce the water content from sluicing operations
  - Reduce disposal volume by combining different types of resin (Bead and POWDEX)
  - Transfer resins shipped from generator sites in reusable containers into disposal containers
  - Dewatering filters get plugged requiring repackaging
  - Processors can be more cost effective than self perform in some cases
  - Generator partially fills a container

# Processing Capabilities

Erwin Resin*Solutions* is capable of multiple processing approaches:

- 1) THOR Processing
- 2) Resin Consolidation and Mixing
- 3) Resin Dewatering
- 4) Repackaging



Shielded and remote operated offsite processing facilities such as Erwin Resin*Solutions* operate with efficient dose management (ALARA) compared to some generator sites

Nuclear power plants also consolidate, mix, and dewater resins prior to shipment offsite to processors and disposal facilities but some choose not to, to reduce operating cost/dose

# THOR Process Overview

## Organic Resin



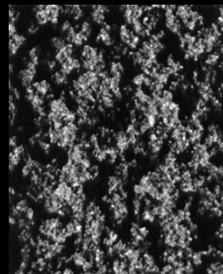
- Polystyrene Beads
- Organics
- Metals
- Water
- Salts

Heat



Mineral Former

## Pyrolyzed Resin



- Fixed Carbon
- Salts
- Metal Oxides, Spinels, and Aluminates

Heat

Oxygen from Superheated Steam



- Metal Oxides, Spinels, and Aluminates
- Salts
- Residual Fixed Carbon

## Reformed Resin



# Resin Consolidation, Mixing, & Dewatering Process Overview

## Organic Resin



- Polystyrene Beads
- Organics
- Metals
- Water
- Salts

## Mechanical Mixing in Storage Tanks



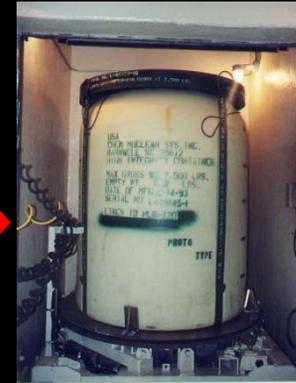
- Ensures homogeneity regardless if THOR process is used

## SEDS System: Transfer and Dewater



- Removes Water

## Resin for Burial



- Polystyrene Beads
- Organics
- Metals
- Salts

# Processing Choice

Waste processing method is customized to comply with a variety of requirements:

- Compact or Customer commingling criteria
- Chemical and/or radiological content and concentrations
- THOR volume reduction impacts
- Resin pass through the facility with limited processing where they already meet disposal facility criteria
- Optimization of package size to reduce logistics costs

# Disposal of Processed Resins



- Waste Classification is determined after processing of resins in compliance with State and Federal regulations – verified by DRC in March 2013
- Waste Classification verified using NRC approved accountability method to track every radionuclide at facility
- All liners, regardless of processing pathway, are surveyed to ensure compliance at disposal site
- Class A waste is shipped to Energy Solutions disposal facility in Clive, Utah
  - Currently limited to 40,000 ft<sup>3</sup> per year until the Utah DRC approves of the updated Performance Assessment (PA)
- Class B/C waste is shipped to the Texas LLRW Compact facility in Andrews, Texas

# Performance Assessment

- February 14, 2011, Energy Solutions requests concurrence that license allows disposal of blended ion-exchange resins.
- December 12, 2011, allowance granted for processed resin disposal up to 40,000 ft<sup>3</sup>/year. This volume represents 1% of waste received at facility.
- DRC requested updated Performance Assessment to dispose > 40,000 ft<sup>3</sup>/year resins
  - Updated dose conversion factors
  - Modeling time frame of 10,000 years
  - Updated waste source term, receptor, and exposure pathways



# PA Timeline



- October 8, 2012 Updated Performance Assessment submitted. PA demonstrates blended resins won't compromise performance objectives.
- June 7, 2013 - Round 1 Interrogatories received.
- December 27, 2013 - Responses to Round 1 Interrogatories submitted.
- July 2, 2014 - Round 2 Interrogatories received.
- July 17, 2014 - Meeting to review Round 2 Interrogatories.

# PA Timeline

- August 1, 2014 - Round 2 Interrogatories simplified to
  - Groundwater Quality Discharge Permit protection limits
  - Viable inadvertent intruder scenario / required dose limit
  - Summaries of proposed evapotranspirative cover-related analytical results from DU PA.
- October 31, 2014 – Targeted submittal date for responses to simplified Round 2 Interrogatories.

# Questions

**UTAH RADIATION CONTROL BOARD**  
**October 14, 2014**

**Division of Radiation Control**  
**Activities Report Summary**

**3<sup>rd</sup> Quarter (July – September) 2014**

**X-ray Program**

*University of Utah Huntsman Cancer Hospital* – This X-ray Registrant (registration number 2357) reported a misadministration on September 22, 2014 for an event that occurred on September 19, 2014. A patient was receiving treatment with a therapeutic radiation machine and the wrong site was treated. A 7.2 centimeter shift occurred such that the lesion was missed by the radiation beam. No critical structure was irradiated. The event involved one fraction of a five-fraction treatment plan with a prescribed dose of 10 gray per fraction. The misadministration is expected to cause no significant effect to the patient.

Number of current registrations 2745, an increase of 16 from the previous quarter  
Number of Inspections conducted by DRC staff 119  
Number of Inspections conducted by Qualified Experts 56

**Radioactive Materials Program**

*Stericycle* – The DRC director participated in a meeting with the DEQ executive director, senior staff of the governor’s office, and environmental advocacy group leaders regarding reported allegations by a former Stericycle employee of noncompliance at the facility. The radioactive materials program manager accompanied staff from the Division of Solid and Hazardous Waste in conducting on-site inspections of the facility. Findings of the inspections regarding radioactive waste management have been provided to DSHW for the preparation of the final compliance report.

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

*Cache Landmark Engineering; UT 0300406; Four Severity Level IV Violations with a Civil Penalty Proposed for one of the violations* – The licensee failed to review the radiation protection program at intervals not to exceed twelve months. This problem was identified during prior inspections on September 28, 2007 and November 1, 2010. A civil penalty of \$1,500.00 was proposed. Other problems listed in the Notice of Violation included: failing to conduct a physical inventory every six months, failing to possess or have access to a radiation survey instrument, and failing to provide training concerning U.S. Department of Transportation requirements (incorporated by reference in R313-19-100). The licensee contested the Notice of Violation by submitting a Request for Agency Action.

Number of current licenses 185 representing 180 licensees  
Radioactive Material Inspections 10  
Number of new licenses issued 2  
Number of licenses renewed 10  
Number of licenses amended 65  
Number of licenses terminated 0

### **Low-Level Waste**

#### *EnergySolutions*

Number of HP Inspections conducted 10  
Number of Eng. Inspections 3  
Number of GW Inspections 4  
Number of license amendments performed 0

*Variance Approval* - In a letter dated September 17, 2014 ES requested an extension to the sealed source disposal variance. The Director in letter dated September 29, 2014 approved the extension for EnergySolutions to receive and dispose of Class A sealed sources until December 31, 2014. The basis for granting the extensions was on the information DRC has received regarding the remaining shipments of sealed sources that have been or are in the final stages of being collected under the SCATR program, and in recognition of the potential need to account for the additional logistical and administrative matters for the final shipment to Clive, the variance to license condition 16A was extended to and will expire on December 31, 2014. All other previous approval conditions for this variance remain in place and are not suspended or superseded by this approval to extend the expiration date.

### **Generator Site Access Program**

Number of incoming shipments that were inspected, GSA program 557  
Number of Notices of Enforcement Discretion (NOED's), Notices of Deficiency (NOD's), and Notices of Violation (NOV's) that were issued 0 NOED, 0 NOD, and 1 NOV

### **Uranium Mills Program**

Number of Health Physics Inspections  
Energy Fuels 2 Uranium One 1 Rio Algom 1  
Number of Engineering Inspections  
Energy Fuels 1 Uranium One 0 Rio Algom 0  
Number of Ground Water Inspections  
Energy Fuels 2 Uranium One 0 Rio Algom 1  
Number of license amendments performed 0

### **Indoor Radon Program**

Radon tests conducted - 440  
Radon mitigations - 106  
Radon Resistant New Construction - 55  
RRNC classes - 2  
Real Estate classes - 3  
Exhibits/Trade Shows - 3  
Local Health District Visits - 12  
Press Releases - 0