

**Comment Resolution for the September 12, 2011 letter
from the Utah Department of Environmental Quality (ML112560021)
Regarding the August 10, 2011, Draft IMPEP Report**

Note: Utah enclosed a copy of the preliminary report marked with the noted comments and changes, including additional minor changes that are not noted below. To assist NRC in its review of the Utah response, they have included the entire text of a given paragraph, unless otherwise noted, with the recommended additional text underlined and suggested deletions in strikeout or followed by their comment. The noted page and paragraph references are based on the printed copy of the draft report.

Comment 1: Page 1, paragraph 3

The Agreement State program is administered by the Division of Radiation Control (the Division). The Division is located within the Department of Environmental Quality (the Department). Organization charts for the Department and the Division, **including the previous division organization and the new organization**, are included as Appendix B. The Utah Radiation Control Board (Board) is appointed by the Utah Governor with the consent of the Utah Senate under the Utah statute (**Utah Code Annotated §19-3-103**). **Under Utah law, the Board has the authority to** establish rules and policies in order for the Division to implement the radiation control program in the state.

Response 1:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

Comment 2: Page 1, paragraph 3

During this IMPEP review period, the Division utilized Lean Six Sigma to analyze and evaluate opportunities for business process improvement **for licensing and permitting of low-level waste disposal facilities**. **One of the analyses performed by the Division in supplement to the Lean Six Sigma evaluation** ~~The initial activity performed by the Division~~ identified key fundamentals necessary for the Engineering Discipline, Geosciences Discipline, and the Health Physics Discipline. Subsequently, each staff member ranked themselves against each of the identified key fundamentals for their respective discipline, with supervisory input and oversight. The Division indicated that the results provided a tool to identify areas of training and development of employees, apply knowledge transfer management, and promote efficiency in the respective Sections. Second, the Division re-evaluated the essential requirements and responsibilities of each Section, utilizing the Lean Six Sigma process improvement plan. As a result, the Division reorganized the Low-Level Radioactive Waste (LLRW) and Uranium Mill responsibilities. Under the reorganization, the Division split the licensing and compliance ~~functions~~ **sections** into two separate sections. As a result, a new Compliance Section Manager was named. The current Low Level Waste/Uranium Mills and Radon Section Manager will manage the new licensing section.

NOTE: A copy of the new organization is enclosed for inclusion in Appendix B.

Response 2:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

Comment 3: *Page 5, last paragraph*

The review team noted that the Division maintains an adequate supply of portable instruments for routine confirmatory surveys and incident/emergency response for the materials program. The instruments are calibrated annually, or as needed, by the Division using an in-house calibration source. An electronic pulser is used to ~~check electronic counting circuits~~ ~~calibrate exposure rate instruments~~. Instruments used for contamination surveys are calibrated with a variety of alpha- and beta-particle calibration sources.

Response 3:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

Comment 4: *Page 6, 3rd paragraph*

Accompaniments of two Radioactive Materials Program inspectors were conducted by a review team member during the week of April 19, 2011. The accompaniments included a health and safety inspection and ~~a security~~ ~~an Increased Controls~~ inspection of an industrial radiography licensee and a health and safety inspection of a panoramic irradiator. The accompaniments are identified in Appendix C. During the accompaniments, the inspectors demonstrated appropriate inspection techniques, knowledge of the regulations, and conducted performance-based inspections. The inspectors were trained, well-prepared for the inspection, and thorough in the audits of the licensee's radiation safety and Increased Controls programs. The inspectors conducted interviews with appropriate licensee personnel, observed licensed operations, performed confirmatory measurements, and utilized good health physics practices. The inspections were adequate to assess radiological health and safety and Increased Controls at the licensed facilities.

Response 4:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

Comment 5: *Page 9, last paragraph*

The review team noted that none of the ~~legislation reviewed by the team~~ ~~legislations amended~~ during the review period affected the Radiation Control Program. However, the State informed the review team that under the provisions of the Utah Legislative Oversight and Sunset Act, Utah Code Annotated (UCA) ~~Chapter~~ ~~Section~~ 63I-1, various state statutes are repealed unless the Legislature acts to reauthorize them by changing the respective repeal dates. The Radiation Control Act (UCA 19-3) sunsets on July 1, 2012, unless the Legislature acts to reauthorize it for a determined period of no more than 10 years. The Division management is scheduled to meet in September 2011, with the Natural Resources, Agriculture, and Environment Interim Committee of the Utah State Legislature to present evidence on why the Radiation Control Act should be reauthorized, and to request that it be reauthorized for a period

of ten years. The Committee then determines if they are going to provide a favorable authorization, and if so, they will recommend a repeal date for this statute. ~~Reauthorization of the Radiation Control Act will then be considered by~~The Division management will present the ~~recommendation in front of~~ the Legislature, during the ~~Legislature~~ General Session that starts in January 2012. The Legislature will determine whether the Radiation Control Act will be reauthorized and subsequently assign a repeal date for this statute.

Response 5:

The review team agrees with all the changes to this paragraph except for the revision to the first sentence. The review team did not conduct a review of the legislation while onsite but relied on information from the questionnaire and discussions with the Utah staff and management. No change will be made to the first sentence based on the State's recommended changes. The remaining changes will be incorporated into the Proposed Final IMPEP report.

Comment 6: Page 10, 3rd and 4th paragraph

The review team examined the State's administrative rulemaking process. When NRC amends its regulations and establishes a due date for State adoption, the **appropriate** Section Manager reviews the Review Summary Sheet for Regulation Amendments and depending on its content assigns it to the appropriate staff in the Division. The State is required to adopt federal rules by reference whenever possible. The Division staff prepares a draft rule package that is reviewed by managers and other staff. After this review, the Division presents the draft rule package in front of the Board to seek authorization to file the package for public comment. After Board authorization, the Division files the draft rule package with the Division of Administrative Rules (DAR), who publishes the draft rule in the State Bulletin for public comment. The public comment period usually lasts 30 days. Once the public comment period ends, the Division addresses comments and presents the final rule package to the Board for final approval. Upon Board approval, the Division submits the final rule package to DAR, which publishes a notice of **effective date** of the final rule in the State Bulletin ~~with its effective date~~.

The review team found that the **state's rulemaking** process **allows for a period of ~~takes~~ 120 days** from filing a draft administrative rule with DAR to codifying a final rule. The State has the authority to issue legally binding requirements (e.g., license conditions) in lieu of regulations until compatible regulations become effective. Many of Utah's compatibility-required regulations are incorporated by reference to NRC regulations.

Response 6:

The review team agrees with these revisions and has revised the Proposed Final IMPEP report to include these changes.

Comment 7: Page 12, 4th paragraph

The review team examined staff training documentation and conducted interviews with selected staff to assess qualification and training needs. The Division updated their "Training Policy Statement" on July 5, 2011. The Training Policy provided the generic training plan that specified the required and recommended training for each technical position. In addition, the engineering positions are required to hold a **professional engineer** license certification issued by the State. The Division generated individual training qualification forms for each individual;

however, the system for tracking and documenting the qualifications was not consistently maintained across the various Sections. Based on interviews with the technical staff and management, and review of staff qualifications, duties, and functions, the review team concluded that the Division was staffed with qualified individuals to carry out their regulatory duty.

Response 7:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

Comment 8: *Page 13, 4th paragraph*

Inspection modules cover areas such as license condition compliance, radiation safety, environmental monitoring, site security, ~~increased controls~~, and emergency planning. An inspection module may be implemented more than once during the year. For example, the radiation safety inspection module is implemented for incoming waste shipments at the EnergySolutions disposal facility either daily or as needed. The review team concluded that the combined inspection modules encompass an annual inspection for the LLRW disposal facility. In 2007, 14 of 17 modules were completed; in 2008, all modules were completed, although the documentation was missing for one module; in 2009, 17 of 19 modules were completed; in 2010, 18 of 19 modules were completed; and in 2011 at the time of the on-site review, a total of 7 modules had been completed. Given that some of the inspection modules were performed multiple times, there were over 200 modular inspections conducted during the review period.

Response 8:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

Comment 9: *Page 15, 3rd paragraph (and Page 22, 1st paragraph, last sentence):*

As noted in Section 3.3, the radioactive materials program has sufficient numbers and types of calibrated instrumentation assigned to the inspector, for the types of license activities inspected. It was unclear whether appropriate instrumentation was available to the Low-Level Waste/Uranium Mills Section inspection staff and whether they had appropriate training in its use. The review team recommends that the Division ensure that sufficient numbers and types of calibrated instruments, appropriate to the activities conducted by the licensee, are available to the Low-Level Waste Section and that the staff is trained in the proper use of the instrumentation.

... The review team also recommends, as discussed in Section 4.3.3, that the Division ensure that sufficient numbers and types of calibrated instruments, appropriate to the activities conducted by the licensee, are available to the Uranium Mills Section.

Division Comment: To improve the Division's inventory of available survey instruments for inspectors, especially for the Low-Level Waste and Uranium Mills programs, the Division has recently purchased a Bicron MICROREMAO (Micro Rem Survey meter). The Division is also evaluating the additional purchase of two beta/gamma dose rate instruments.

Response 9:

The review team appreciates the Division's response to the recommendations. No changes were made to report based on this comment.

Comment 10: *Page 16, last paragraph*

The Division used independent analyses and actively solicited public comments during the licensing process through public hearings. The Division hired a technical consultant to address certain complex technical issues to verify the licensee's analysis for license renewal. The Board approved a new rule on April 14, 2010, that required EnergySolutions to conduct a performance assessment before disposing of **concentrated** depleted uranium. The review team noted that the Division engaged in extensive public outreach on November 9-10, 2010, and on February 1, 2011, regarding the performance assessment for the disposal of large quantities of **concentrated** depleted uranium. The Division indicated that information from these discussions was taken into consideration as the final performance assessment was developed. The licensee's performance assessment was delivered to the Division on June 1, 2011, and is currently under review by the Division.

Response 10:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

Comment 11: *Page 17, 3rd paragraph, last sentence:*

In another example, the term "allegation" was applied to concerns that were being addressed through the Board.

Division Comment: In the absence of a specific example, the Division believes this statement to be incorrect since Board involvement regarding "allegations" is extremely rare. Perhaps the review team may have misunderstood any information that may have been provided.

Response 11:

The review team agrees that there may have been some misunderstanding and has deleted the above statement from the Proposed Final IMPEP report.

Comment 12: *Page 23, Recommendation 1*

The review team recommends that the Division institute appropriate training in all aspects of the allegation response program to ensure that LLRW and the Uranium Mills program staff have the same competency and consistency in handling allegations as demonstrated by the Radioactive Materials program staff.

Division Comment: Training regarding allegations will be provided to Division managers and technical staff (including recent hires), to assure the policy is fully implemented and consistent throughout the Division. Please be advised that a staff training session has been scheduled for September 27, 2011.

Response 12:

The review team appreciates the Division's response to the recommendation. No changes were made to report based on this comment.

Comment 13: *Page 23, Recommendation 2*

The review team recommends that independent and confirmatory radiation measurements are performed with the appropriate calibrated instruments for inspections conducted by the LLRW and the Uranium Mills program staff.

Division Comment: The Division respectfully disagrees with the premise that independent and confirmatory radiation measurements are not performed by LLRW and Uranium Mills program staff. Independent radiation measurements have been performed numerous times throughout the years at the LLRW disposal facility and Uranium Mill facilities. As discussed in the meetings held during the IMPEP review, if enforcement action is going to be taken against the licensee, then the inspector will request the licensee to perform the same radiation measurement so the measurement is acknowledged by the licensee. This helps expedite the enforcement action and many times eliminates additional response letters regarding the violation, thus getting to corrective actions and implementation in a timely manner by the licensee.

Response 13:

The review team appreciates the Division's response to the recommendation. However, no changes will be made to report based on this comment until the review team presents and discusses its findings with the Management Review Board. At that time, the review team welcomes the additional insight from the Division and appreciates that the Division management will be attending the meeting in person.

Comment 14: *Page 23, Recommendation 3*

The review team recommends the Division ensures that sufficient numbers and types of calibrated instruments, appropriate to the activities conducted by the licensee, are available to the LLRW and the Uranium Mills program staff and that the staff is trained in the proper use of the instrumentation.

Response: The DRC has requested the purchase of instruments to alleviate the issue regarding quantity and type of instruments available for staff to use. (See above response to Page 15, 3rd paragraph.) Training will be performed when instruments arrive. This training will be documented. Regarding calibration of instruments, all Division instruments have been or are in calibration as of September 8, 2011.

Response 14:

The review team appreciates the Division's response to the recommendation. No changes were made to report based on this comment.

Comment 15: *Appendix C: Accompaniment No.: 7:*

The review team noted that good health physics practices (i.e., proper use of personal protective equipment and personal dosimetry) were not followed by a few of the employees at the site while performing work. The inspector did not bring up these observations to the employees attention.

Division Comment: The concerns that were brought up by the IMPEP team were followed up on and documented in the inspection report that was sent to the Licensee under cover letter dated July 12, 2011, and was available for review during the July 11-14 IMPEP review. It is documented in the inspection report that the items that the IMPEP team brought to the inspector's attention were discussed in the exit meeting with licensee's radiation safety officer. (Document Number: DRC-2011-007147)

Response 15:

The review team appreciates the Division's response to the comment made to inspector as a result of the inspector accompaniments conducted by the review team members. No changes were made to report based on this comment.

Comment 16: *Appendix C: Accompaniment No.: 9:*

The inspector did not carry a radiation survey instrument during the facility inspection. During the exit survey, the review team noted that the instrument range selector switch was not properly set and that the two employees did not survey themselves properly for presence of contamination. No records were reviewed by the inspector during the inspection. Training and personnel monitoring records for two of the three employees were not reviewed by the inspector.

Division Comment: It was the Division's understanding regarding this licensee/facility that this was a site visit and a general site tour. The visit was done at the request of the NRC IMPEP team who requested to visit all of the uranium mill sites in Utah. The inspector acknowledges that he did not carry a survey instrument that day because he understood the nature of the site visit to be a general site tour. The inspector did follow up on the meter that was used to scan out of the restricted area and, due to type of meter used, the 10X factor was the correct range selector. This was documented in the inspection report dated June 29, 2011 that was completed and sent to the licensee. Based on explanations provided by the licensee in follow-up emails, the correct range was selected.

The inspection report and email correspondence was available for the IMPEP team during the July visit. As far as improperly surveying, this concern was brought to the inspector's attention during a meeting in Blanding on June 8, 2011, two days after the team left Shooting Canyon Mill. The inspector could not recall his observation regarding the staff's contamination monitoring techniques; therefore, this will be reviewed during future inspections.

Response 16:

The review team appreciates the Division's response to this comment made to inspector as a result of the inspector accompaniments conducted by the review team members. We regret any misunderstanding that may have occurred that this was not considered an inspector accompaniment by the Division and the inspector, but IMPEP review teams do

not conduct site visits or site tours of licensees. The email correspondence between the team leader and Division management list this licensee as an inspector accompaniment. Staff is proposing the following changes to the second paragraph on page 21 of the Draft IMPEP report to be consistent throughout the paragraph as to the inspections conducted at the three uranium mill facilities.

Page 21, 2nd paragraph:

On June 6-8, 2011, members of the review team accompanied a Uranium Mills program inspector during an inspection of the Shootaring Canyon Mill, White Mesa Mill, and Lisbon Valley Mill facilities. The inspector did not carry a radiation survey instrument during the Shootaring Canyon Mill facility inspection. During the accompaniment at Shootaring Canyon Mill, the review team observed several instances of improper health physics practice by the licensee, which were not identified by the inspector. These items are noted in Appendix C; and were discussed with the inspectors at the conclusion of the accompaniments. During the accompaniment at the White Mesa Mill, the inspector carried a radiation survey instrument during the **inspectionfacility tour**. The inspector demonstrated appropriate surveying skills and focused on specific aspects of the licensee's radiation protection and environmental programs, and followed up on items from the previous inspection. The review team accompanied the inspector during an inspection of the Lisbon Valley Mill facility. The inspector carried a radiation survey instrument during the **inspectionfacility tour**. The inspector checked for proper postings and the integrity of the fence. The review team found the inspection modules to be comprehensive and appropriately reflected the requirements in the radioactive material license, and/or relevant NRC Regulatory Guides.

Also, on review of the comment on Accompaniment No.: 9, staff believes that the last sentence "Training and personnel monitoring records for two of the three employees were not reviewed by the inspector." should be deleted since the review team already noted that no records were review.

No other changes were made to report based on Division's comment at this time.

Comment 17: *Appendix D, page 1, File No.: 7:*

Correct the license reviewer initials from "CG" to "CJ."

Response 17:

The review team agrees with the revision and has revised the Proposed Final IMPEP report to include this change.

ADDITIONAL NRC STAFF CLARIFICATION CORRECTIONS TO THE PROPOSED FINAL IMPEP REPORT

Appendix D

File 27. The following comment is deleted. This is not a deficiency in the review of the license file.

Comment

The Division requested Uranium One to provide justification for continuing to maintain their radioactive material license or submit a decommissioning plan.

Appendix E

File 1. The following comment is deleted. This is a description of the event and not a deficiency in the review of the incident file.

Comment:

When the licensee attempted to close the shutter (Ohmart Model SH-F2, SN 1404CG) one of the screws for the operating handle broke and the shutter remained open.

File 2. The following comment is deleted. This is a description of the event and not a deficiency in the review of the incident file.

Comment:

When the licensee attempted to close the shutter (Ohmart Model SH-F2, SN 1849CG) one of the screws for the operating handle broke and the shutter remained open.

File 3. The following comment is deleted. This is a description of the event and not a deficiency in the review of the incident file.

Comment:

When the licensee attempted to close the shutter (Ohmart Model SH-F1, SN LS-620) both of the screws for the operating handle sheared off and the shutter remained open. The Radioactive Materials Section provided detailed information for File Nos. 1-3 above, to the State of Ohio regarding a potential Part 21 issue, in that the material for the screws may be suspect and did not meet the SS&DR.

File 10. The following comment is deleted. This is a description of the event and not a deficiency in the review of the incident file.

Comment:

The licensee reported theft and recovery the same day, of a moisture/density gauge. The Division spoke with law enforcement, licensee, and the individual who recovered the gauge as the Division developed their documentation of the event.

File 12. The following comment is deleted. This is a description of the event and not a deficiency in the review of the incident file.

Comment:

Failure to properly communicate between the radiographer and assistant, which resulted in the failure to verify that the guide tube was properly attached to the camera prior to exposing the radiography source.

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