



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

December 20, 2019

Mr. Scott Baird  
Interim Executive Director  
Utah Department of Environmental Quality  
195 North 1950 West, P.O. Box 144810  
Salt Lake City, UT 84114

Dear Mr. Baird:

On September 21, 2019, the Management Review Board (MRB), which consisted of U.S. Nuclear Regulatory Commission (NRC) senior managers and an Organization of Agreement States Liaison to the MRB, met to consider the results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Utah Agreement State Program. The MRB found the Utah program adequate to protect public health and safety and compatible with the NRC program.

The enclosed final report documents the IMPEP team's findings and summarizes the results of the MRB meeting (Section 5.0). Based on the results of the current IMPEP review, the next full review of the Utah Agreement State Program will take place in approximately 4 years, with a periodic meeting in approximately 2 years.

I appreciate the courtesy and cooperation extended to the IMPEP team during the review. I also wish to acknowledge your continued support for the Agreement State program. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,

***/RA John W. Lubinski for/***

K. Steven West  
Deputy Executive Director for Materials, Waste,  
Research, State, Tribal, Compliance, Administration,  
and Human Capital Programs  
Office of the Executive Director for Operations

Enclosure:  
Utah Final IMPEP Report

cc: Stephen James, Supervisor,  
Agreement State Program  
Bureau of Environmental Health and Radiation  
Protection, State of Ohio  
Organization of Agreement States  
Liaison to the MRB

SUBJECT: UTAH FY2019 FINAL INTEGRATED MATERIALS PERFORMANCE  
 EVALUATION PROGRAM DATED: DATE: DECEMBER 20, 2019

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE UTAH PROGRAM

September 9-13, 2019

**FINAL REPORT**

Enclosure

## **EXECUTIVE SUMMARY**

The results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Utah Agreement State Program are discussed in this report. The review was conducted during the period of September 9-13, 2019.

Based on the results of this review, Utah's performance was found satisfactory, for all eight performance indicators reviewed. The team did not make any new recommendations.

Accordingly, the team recommended, and the Management Review Board (MRB) agreed, that the Utah Agreement State Program be found adequate to protect public health and safety and compatible with the U.S. Nuclear Regulatory program. The team recommended, and the MRB agreed, that the next IMPEP review take place in approximately 4 years, with a periodic meeting in approximately 2 years.

## 1.0 INTRODUCTION

The Utah Agreement State Program (the Program) review was conducted during the period of September 9-13, 2019, by a team comprised of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the States of North Carolina, Texas, and Washington. Team members are identified in Appendix A. The review was conducted in accordance with the "Agreement State Program Policy Statement," published in the *Federal Register* on October 18, 2017 (82 FR 48535), and NRC Management Directive (MD) 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)," dated February 26, 2004. Preliminary results of the review, which covered the period of December 14, 2017, through September 13, 2019, for the indicators Technical Quality of Incidents and Allegation Activities and Compatibility Requirement; and August 1, 2015, through September 13, 2019, for all other indicators, were discussed with Utah managers on the last day of the review.

In preparation for the review, a questionnaire addressing the common performance indicators and applicable non-common performance indicators was sent to Utah on March 27, 2019. Utah provided its original response to the questionnaire on August 12, 2019, and a revised response was forwarded on August 14, 2019. A copy of the most recent questionnaire response is available in the NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML19268A696.

A draft of this report was issued to Utah on October 8, 2019, for factual comment (ADAMS Accession Number ML19277F909). Utah responded to the draft report by letter dated October 16, 2019, from Ty L. Howard, Director, Division of Waste Management and Radiation Control, (ADAMS Accession Number ML19290D692). The Management Review Board (MRB) convened on November 21, 2019, to discuss the team's findings.

The Program is administered by the Division of Waste Management and Radiation Control (the Division). Within the Division are the Low-Level Radioactive Waste Section (LLRW Section) and the Uranium Mills/Radioactive Materials Section (U Mills/RAM Section). Organization charts for the State are available in ADAMS (Accession Number ML19268A741).

At the time of the review, the Program regulated 192 specific licenses authorizing possession and use of radioactive materials. The review focused on the radioactive materials program as it is carried out under Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Utah.

The team evaluated the information gathered against the established criteria for each common and the applicable non-common performance indicators and made a preliminary assessment of the State's performance.

## 2.0 PREVIOUS IMPEP REVIEW AND STATUS OF RECOMMENDATIONS

The previous IMPEP review concluded on July 31, 2015. The final report is available in ADAMS (Accession Number ML15306A357). A follow-up IMPEP review was conducted in 2017 to review the indicators Technical Quality of Incident and Allegation Activities, and Compatibility Requirements, which were found less than satisfactory in the 2015 IMPEP review. The final report is available in ADAMS (Accession Number ML18064A117). The results of the reviews are as follows:

Technical Staffing and Training: Satisfactory  
Recommendation: None

Status of Materials Inspection Program: Satisfactory  
Recommendation: None

Technical Quality of Inspections: Satisfactory  
Recommendation: None

Technical Quality of Licensing Actions: Satisfactory  
Recommendation: None

Technical Quality of Incident and Allegation Activities: Satisfactory but Needs Improvement (2015); Satisfactory (2017)  
Recommendation: None

Compatibility Requirements: Unsatisfactory (2015); Satisfactory (2017)  
Recommendation: None

LLRW Disposal Program: Satisfactory  
Recommendation: None

Uranium Recovery Program: Satisfactory  
Recommendation: None

Overall finding in 2015: Adequate to protect public health and safety and not compatible with the NRC's program.

Overall finding after the 2017 follow-up IMPEP review: Adequate to protect public health and safety and compatible with the NRC program.

## 3.0 COMMON PERFORMANCE INDICATORS

Five common performance indicators are used to review the NRC regional and Agreement State radioactive materials programs. These indicators are: (1) Technical Staffing and Training, (2) Status of Materials Inspection Program, (3) Technical Quality of Inspections, (4) Technical Quality of Licensing Actions, and (5) Technical Quality of Incident and Allegation Activities.

### 3.1 Technical Staffing and Training

The ability to conduct effective licensing and inspection programs is largely dependent on having a sufficient number of experienced, knowledgeable, well-trained technical personnel. Under certain conditions, staff turnover could have an adverse effect on the implementation of these programs, and could affect public health and safety. Apparent trends in staffing must be explored. Review of staffing also requires consideration and evaluation of the levels of training and qualification. The evaluation standard measures the overall quality of training available to, and taken by, materials program personnel.

#### a. Scope

The team used the guidance in State Agreements procedure SA-103, "Reviewing the Common Performance Indicator: Technical Staffing and Training," and evaluated Utah's performance with respect to the following performance indicator objectives:

- A well-conceived and balanced staffing strategy has been implemented throughout the review period.
- Training and qualification program is equivalent to NRC Inspection Manual Chapter (IMC) 1248, "Formal Qualifications Program for Federal and State Material and Environmental Management Programs."
- Qualification criteria for new technical staff are established and are followed, or qualification criteria will be established if new staff members are hired.
- Any vacancies, especially senior-level positions, are filled in a timely manner.
- There is a balance in staffing of the licensing and inspection programs.
- Management is committed to training and staff qualification.
- Individuals performing materials licensing and inspection activities are adequately qualified and trained to perform their duties.
- License reviewers and inspectors are trained and qualified in a reasonable period of time.

#### b. Discussion

Utah's radioactive material portion of the U Mills/RAM Section is comprised of seven staff members which equals 4.5 full-time equivalent (FTE) for the radioactive materials program when fully staffed. Currently, there are no vacancies. During the review period one staff member retired and one qualified materials inspector from another Agreement State program was hired to fill this vacancy. The position was vacant for 4 months. The four technical staff members are all qualified as materials inspectors and materials license reviewers.

Utah has a training and qualification program compatible with the NRC's IMC 1248 including the requirements for refresher training which is conducted every 2 years.

c. Evaluation

The team determined that, during the review period, Utah met the performance indicator objectives listed in Section 3.1.a. Based on the criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, Technical Staffing and Training, be found satisfactory.

d. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

3.2 Status of Materials Inspection Program

Periodic inspections of licensed operations are essential to ensure that activities are being conducted in compliance with regulatory requirements and consistent with good safety practices. The frequency of inspections is specified in IMC 2800, "Materials Inspection Program," and is dependent on the amount and kind of material, the type of operation licensed, and the results of previous inspections. There must be a capability for maintaining and retrieving statistical data on the status of the inspection program.

a. Scope

The team used the guidance in State Agreements procedure SA-101, "Reviewing the Common Performance Indicator: Status of the Materials Inspection Program," and evaluated Utah's performance with respect to the following performance indicator objectives:

- Initial inspections and inspections of Priority 1, 2, and 3 licensees are performed at the frequency prescribed in IMC 2800.
- Candidate licensees working under reciprocity are inspected in accordance with the criteria prescribed in IMC 1220, "Processing of NRC Form 241, Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, and Offshore Waters, and Inspection of Agreement State Licensees Operating Under 10 CFR 150.20."
- Deviations from inspection schedules are normally coordinated between technical staff and management.
- There is a plan to perform any overdue inspections and reschedule any missed or deferred inspections, or a basis has been established for not performing any overdue inspections or rescheduling any missed or deferred inspections.
- Inspection findings are communicated to licensees in a timely manner (30 calendar days, or 45 days for a team inspection, as specified in IMC 0610, "Nuclear Material Safety and Safeguards Inspection Reports").



b. Discussion

Utah performed 121 Priority 1, 2, and 3 inspections; and 35 initial inspections during the review period. Utah conducted 3 of 121 Priority 1, 2, and 3 inspections overdue which represents 1.9 percent. This is well below the target of no more than 25 percent overdue. No initial inspections were conducted overdue during the review period.

Utah's inspection frequencies are at least as frequent as the NRC for similar license types in IMC 2800.

A sampling of 40 inspection reports indicated that 2 of the inspection findings were communicated to the licensees beyond Utah's goal of 30 days after the inspection exit. One of the reports was 3 days late because it was associated with the investigation of an allegation. The second report was 12 days late because it was associated with an out-of-state licensee that performed work in Utah without requesting reciprocity. Each year of the review period, Utah performed greater than 20 percent of candidate reciprocity inspections.

c. Evaluation

The team determined that, during the review period, Utah met the performance indicator objectives listed in Section 3.2.a. Based on the criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

d. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

3.3 Technical Quality of Inspections

Inspections, both routine and reactive, provide assurance that licensee activities are carried out in a safe and secure manner. Accompaniments of inspectors performing inspections, and the critical evaluation of inspection records, are used to assess the technical quality of an Agreement State's inspection program.

a. Scope

The team used the guidance in State Agreements procedure SA-102, "Reviewing the Common Performance Indicator: Technical Quality of Inspections," and evaluated Utah's performance with respect to the following performance indicator objectives:

- Inspections of licensed activities focus on health, safety, and security.
- Inspection findings are well-founded and properly documented in reports.
- Management promptly reviews inspection results.

- Procedures are in place and used to help identify root causes and poor licensee performance.
- Inspections address previously identified open items and violations.
- Inspection findings lead to appropriate and prompt regulatory action.
- Supervisors, or senior staff as appropriate, conduct annual accompaniments of each inspector to assess performance and assure consistent application of inspection policies.
- For programs with separate licensing and inspection staffs, procedures are established and followed to provide feedback information to license reviewers.
- Inspection guides are consistent with NRC guidance.
- An adequate supply of calibrated survey instruments is available to support the inspection program.

b. Discussion

The team evaluated the inspection reports, enforcement documentation, and interviewed inspectors involved in materials inspections conducted during the review period. The casework reviewed included inspections conducted by three of Utah's current inspectors and by a former inspector who retired. The casework covered medical, industrial, commercial, academic, research, and service licenses.

A team member accompanied two program inspectors on June 19 and 20, 2019. The inspector accompaniments are identified in Appendix B. One accompaniment included the review of 10 CFR Part 37 security requirements and observations at a temporary job site. No performance issues were noted during the inspection accompaniments. The inspectors were well prepared, and thorough, and assessed the impact of licensed activities on health, safety, and security.

Supervisory accompaniments were conducted at least annually for all inspectors. In addition, the program has an adequate supply of radiation detection instruments to support the program. All instruments were always determined to be properly calibrated during use.

c. Evaluation

The team determined that, during the review period, Utah met the performance indicator objectives listed in Section 3.3.a. Based on the criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, Technical Quality of Inspections, be found satisfactory.

d. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

### 3.4 Technical Quality of Licensing Actions

The quality, thoroughness, and timeliness of licensing actions can have a direct bearing on public health and safety, as well as security. An assessment of licensing procedures, actual implementation of those procedures, and documentation of communications and associated actions between the Utah RAM Section licensing staff and regulated community is a significant indicator of the overall quality of the licensing program.

#### a. Scope

The team used the guidance in State Agreements procedure SA-104, "Reviewing the Common Performance Indicator: Technical Quality of Licensing Actions," and evaluated Utah's performance with respect to the following performance indicator objectives:

- Licensing action reviews are thorough, complete, consistent, and of acceptable technical quality with health, safety, and security issues properly addressed.
- Essential elements of license applications have been submitted and elements are consistent with current regulatory guidance (e.g., financial assurance, 10 CFR Part 37 equivalent, pre-licensing guidance).
- License reviewers, if applicable, have the proper signature authority for the cases they review independently.
- License conditions are stated clearly and can be inspected.
- Deficiency letters clearly state regulatory positions and are used at the proper time.
- Reviews of renewal applications demonstrate a thorough analysis of a licensee's inspection and enforcement history.
- Applicable guidance documents are available to reviewers and are followed (e.g., NUREG-1556 series, pre-licensing guidance, regulatory guides, etc.).
- Licensing practices for risk-significant radioactive materials are appropriately implemented including 10 CFR Part 37 equivalent.
- Documents containing sensitive security information are properly marked, handled, controlled, and secured.

#### b. Discussion

During the review period, Utah performed 350 radioactive materials licensing actions. The team evaluated 26 of those licensing actions. The licensing actions selected for review included 5 new applications, 13 amendments, 5 renewals, and 3 terminations. The team evaluated casework which included the following license types and actions: medical diagnostic and therapy, nuclear pharmacy, industrial radiography, portable and fixed gauges, well logging, veterinary, and waste receipt, transport, storage, and packaging. The casework sample represented work from six license reviewers including one manager, and current and former license reviewers.

The team reviewed licenses for compliance with financial assurance program requirements. The team verified that the proper financial assurance documentation was on file and that the information was appropriately protected. The team found the

documentation of a license amendment to allow a licensee to draw on a financial instrument to be thorough, complete, and clear.

Based on the review, the team found that actions terminating a license were well documented, included the appropriate survey records, and contained documentation of proper disposal or transfer of radioactive material, as appropriate.

The team noted that the Program issued renewal licenses for 10 years. Through interviews with the staff, the team determined that although the license reviewer considered the licensee's inspection and enforcement history during reviews of renewal applications, the team found one action where it was not documented. The UMills/RAM Section indicated, and the team confirmed, that a statement addressing inspection and enforcement history is normally included in the file. However, the license reviewer inadvertently removed the statement from the record in this one case.

The team assessed the Program's implementation of the NRC's "Checklist to Provide a Basis for Confidence that Radioactive Material will be used as Specified on the License" (pre-licensing guidance). The Program has implemented the essential elements of the pre-licensing guidance revised August 9, 2018. Based on the files reviewed, the team determined that in all cases, except for one, the assigned license reviewer used the pre-licensing guidance appropriately prior to the issuance of the license. There was one instance where the pre-licensing guidance documentation was not found for a licensing action and the team could not determine if the Program had completed it. The Program staff believed that the pre-licensing guidance had been used; however, the completed checklist was not located while the team was on site.

The team reviewed the Program's implementation of the risk significant radioactive materials (RSRM) checklist. The team found that although the essential objectives of the RSRM checklist were being met, the Program was not documenting the use of the checklist. The team determined that the licensing actions were properly identified as a RSRM action, information was being entered into the National Source Tracking System, and onsite security reviews were conducted by the Program, as appropriate. At the time of the review, the Program committed to revising its procedure to include the use and documentation of the RSRM checklist.

### Evaluation

The team determined that, during the review period, Utah met the performance indicator objectives listed in Section 3.4.a. Based on the criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, Technical Quality of Licensing Actions, be found satisfactory.

#### c. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

### 3.5 Technical Quality of Incident and Allegation Activities

The quality, thoroughness, and timeliness of response to incidents and allegations of safety concerns can have a direct bearing on public health and safety. An assessment of incident response and allegation investigation procedures, actual implementation of these procedures, internal and external coordination, and investigative and followup actions, are a significant indicator of the overall quality of the incident response and allegation programs.

#### a. Scope

The team used the guidance in State Agreements procedure SA-105, "Reviewing the Common Performance Indicator: Technical Quality of Incident and Allegation Activities," and evaluated Utah's performance with respect to the following performance indicator objectives:

- Incident response, investigation, and allegation procedures are in place and followed.
- Response actions are appropriate, well-coordinated, and timely.
- On-site responses are performed when incidents have potential health, safety, or security significance.
- Appropriate followup actions are taken to ensure prompt compliance by licensees.
- Followup inspections are scheduled and completed, as necessary.
- Notifications are made to the NRC Headquarters Operations Center for incidents requiring a 24-hour or immediate notification to the Agreement State or NRC.
- Incidents are reported to the Nuclear Material Events Database (NMED).
- Allegations are investigated in a prompt, appropriate manner.
- Concerned individuals are notified of investigation conclusions.
- Concerned individuals' identities are protected, as allowed by law.

#### b. Discussion

During the review period (December 14, 2017, to September 13, 2019), 10 incidents were reported to Utah. The team evaluated all 10 radioactive materials incidents which included 5 lost/stolen radioactive materials, 1 found source, 1 potential overexposure (not reportable), 1 medical event, and 2 damaged equipment.

The team found that the Program properly evaluated each incident, interviewed involved individuals, and documented its findings. When an incident is reported to the Program, inspection staff is dispatched for onsite followup for all incidents. The Program has adopted a "boots on the ground" approach for all incidents.

The team verified that notifications are made to the NRC Headquarters Operations Center within the required timeframes. Also, incidents are reported to and updated in NMED, as appropriate.

During the review period, no allegations were received by Utah.

c. Evaluation

The team determined that, during the review period, Utah met the performance indicator objectives listed in Section 3.5.a. Based on the criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, Technical Quality of Incident and Allegation Activities, be found satisfactory.

d. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

#### 4.0 NON-COMMON PERFORMANCE INDICATORS

Four non-common performance indicators are used to review Agreement State programs: (1) Compatibility Requirements; (2) Sealed Source and Device (SS&D) Evaluation Program; (3) LLRW Program; and (4) Uranium Recovery Program. The NRC's Agreement with Utah does not relinquish regulatory authority for sealed source and device evaluations; therefore, only Compatibility Requirements, LLRW Disposal Program, and Uranium Recovery Program non-common performance indicators applied to this review.

#### 4.1 Compatibility Requirements

State statutes should authorize the State to establish a program for the regulation of agreement material and provide authority for the assumption of regulatory responsibility under the agreement. The statutes must authorize the State to promulgate regulatory requirements necessary to provide reasonable assurance of protection of public health, safety, and security. The State must be authorized through its legal authority to license, inspect, and enforce legally binding requirements, such as regulations and licenses. NRC regulations that should be adopted by an Agreement State for purposes of compatibility or health and safety should be adopted in a time frame so that the effective date of the State requirement is not later than 3 years after the effective date of the NRC's final rule. Other program elements, as defined in Appendix A of State Agreements procedure SA-200, "Compatibility Categories and Health and Safety Identification for NRC Regulations and Other Program Elements," that have been designated as necessary for maintenance of an adequate and compatible program, should be adopted and implemented by an Agreement State within 6 months following NRC designation.

a. Scope

The team used the guidance in State Agreements procedure SA-107, "Reviewing the Non-Common Performance Indicator: Compatibility Requirements," and evaluated Utah's performance with respect to the following performance indicator objectives. A complete list of regulation amendments can be found on the NRC website at the following address: <https://scp.nrc.gov/regtoolbox.html>.

- The Agreement State program does not create conflicts, duplications, gaps, or other conditions that jeopardize an orderly pattern in the regulation of radioactive materials under the Atomic Energy Act, as amended.
- Regulations adopted by the Agreement State for purposes of compatibility or health and safety were adopted no later than 3 years after the effective date of the NRC regulation.
- Other program elements, as defined in SA-200 that have been designated as necessary for maintenance of an adequate and compatible program, have been adopted and implemented within 6 months of NRC designation.
- The State statutes authorize the State to establish a program for the regulation of agreement material and provide authority for the assumption of regulatory responsibility under the agreement.
- The State is authorized through its legal authority to license, inspect, and enforce legally binding requirements such as regulations and licenses.
- Sunset requirements, if any, do not negatively impact the effectiveness of the State's regulations.

b. Discussion

Utah became an Agreement State on April 1, 1984. The Utah Agreement State Program statutory authority is contained in the Utah Code Annotated, Title 19, Chapter 3, Radiation Control Act. The Division is designated as Utah's radiation control agency. One piece of legislation affecting the radiation control program was enacted into law during the review period (December 14, 2017, to September 13, 2019). In 2019, the Radiation Control Act was amended to (1) provide that certain waste classifications are determined at the time of acceptance, (2) allow the Division Director to authorize alternate requirements for waste classification and characteristics, (3) require notification to the Legislature on alternate waste classification determinations, (4) require certain conditions associated with the disposal of more than one metric ton of concentrated depleted uranium, and (5) impose a tax on the disposal of concentrated depleted uranium. NRC staff reviewed the legislation for compatibility with the National Materials Program and had no comments (ADAMS Accession No. ML19057A373).

Utah's administrative rulemaking process takes approximately 5 months from drafting to finalizing a rule. The public, NRC, other agencies, and potentially impacted licensees and registrants are offered an opportunity to comment during the process. Comments are considered and incorporated, as appropriate, before the regulations are finalized and approved by the Waste Management and Radiation Control Board. The team noted that the State's rules and regulations are not subject to "sunset" laws.

During the review period, four NRC amendments were due for adoption. Utah adopted three of the four amendments within 3 years of the effective date of the NRC regulation. The remaining amendment (Regulation Amendment Tracking System Identification Number 2015-2) was adopted 6 months late. The adoption of this amendment was delayed so it could be included with another minor amendment for administrative efficiency. There are currently no overdue regulations.

Utah adopted all other program elements required for compatibility within 6 months of NRC designation.

c. Evaluation

The team determined that, during the review period, Utah met the performance indicator objectives listed in Section 4.1.a. Based on the criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, Compatibility Requirements, be found satisfactory.

d. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

4.2 LLRW Disposal Program

The objective is to determine if Utah's LLRW disposal program is adequate to protect public health and safety. Five sub-elements are used to make this determination: (1) Technical Staffing and Training; (2) Status of LLRW Inspection Program; (3) Technical Quality of Inspections; (4) Technical Quality of Licensing Actions; and (5) Technical Quality of Incident and Allegation Activities.

a. Scope

The team used the guidance in State Agreements procedure SA-109, "Reviewing the Non-Common Performance Indicator: Low-Level Radioactive Waste Disposal Program," and evaluated Utah's performance with respect to the following performance indicator objectives:

Technical Staffing and Training

- Qualified and trained technical staff are available to license, regulate, control, inspect, and assess the operation and performance of the LLRW disposal facility.
- Qualification criteria for new LLRW technical staff are established and are followed or qualification criteria will be established if new staff members are hired.
- Any vacancies, especially senior-level positions, are filled in a timely manner.
- There is a balance in staffing the LLRW licensing and inspection programs.
- Management is committed to training and staff qualification.
- Individuals performing LLRW licensing and inspection activities are adequately qualified and trained to perform their duties.
- LLRW license reviewers and inspectors are trained and qualified in a reasonable period of time.



### Status of LLRW Inspection Program

- The LLRW facility is inspected at prescribed frequencies.
- Statistical data on the status of the inspection program are maintained and can be retrieved.
- Deviations from inspection schedules are coordinated between LLRW technical staff and management.
- There is a plan to perform any overdue inspections and reschedule any missed or deferred inspections; or a basis has been established for not performing any overdue inspections or rescheduling any missed or deferred inspections.
- Inspection findings are communicated to licensees in a timely manner.

### Technical Quality of Inspections

- Inspections of LLRW licensed activities focus on health, safety, and security.
- Inspection findings are well-founded and properly documented in reports.
- Management promptly reviews inspection results.
- Procedures are in place and used to help identify root causes and poor licensee performance.
- Inspections address previously identified open items and violations.
- Inspection findings lead to appropriate and prompt regulatory action.
- Supervisors, or senior staff as appropriate, conduct annual accompaniments of each LLRW inspector to assess performance and assure consistent application of inspection policies.
- Inspection guides are consistent with NRC guidance.
- An adequate supply of calibrated survey instruments is available to support the inspection program.

### Technical Quality of Licensing Actions

- Licensing action reviews are thorough, complete, consistent, and of acceptable technical quality with health, safety, and security issues properly addressed.
- Applicable LLRW guidance documents are available to reviewers and are followed (e.g., pre-licensing guidance, regulatory guides, etc.).
- Essential elements of license applications have been submitted and elements are consistent with current NRC or Agreement State regulatory guidance for describing the isotopes and quantities used, qualifications of authorized users, facilities, equipment, locations of use, operating and emergency procedures, and any other requirements necessary to ensure an adequate basis for the licensing action, e.g., financial assurance, 10 CFR Part 37 equivalent, etc.
- LLRW license reviewers, if applicable, have the proper signature authority for the cases they review independently.
- License tie-down conditions are stated clearly and can be inspected.
- Deficiency letters clearly state regulatory positions and are used at the proper time.
- Reviews of renewal applications demonstrate a thorough analysis of a licensee's inspection and enforcement history.

- Licensing practices for risk significant radioactive materials are appropriately implemented including 10 CFR Part 37 equivalent.
- Documents containing sensitive security information are properly marked, handled, controlled, and secured.

#### Technical Quality of Incident and Allegation Activities

- LLRW incident response, investigation, and allegation procedures are in place and followed.
- Response actions are appropriate, well-coordinated, and timely.
- On-site responses are performed when incidents have potential health, safety, or security significance.
- Appropriate followup actions are taken to ensure prompt compliance by licensees.
- Followup inspections are scheduled and completed, as necessary.
- Notifications are made to the NRC Headquarters Operations Center for incidents requiring a 24-hour or immediate notification to the Agreement State or NRC.
- Incidents are reported to the NMED.
- Allegations are investigated in a prompt, appropriate manner.
- Concerned individuals are notified of investigation conclusions.
- Concerned individuals' identities are protected, as allowed by law.

#### b. Discussion

At the time of the IMPEP review, the Utah LLRW program consisted of one active/operational licensee that is a near surface disposal facility that only accepts Class A waste and 11.e(2) byproduct material.

#### Technical Staffing and Training

The LLRW program is comprised of 11 staff members which equals to 8.65 FTE. Currently, there are no vacancies. During the review period one of the LLRW program staff members retired and one staff member was hired. The position was vacant for 4 months. Utah has a training program equivalent to NRC training requirements listed in NRC's IMC 1248, Appendix E.

#### Status of LLRW Disposal Inspection Program

Utah performed 71 inspections during the review period. The team determined that Utah completed all LLRW inspections in accordance with the frequency in NRC's IMC 2401.

Utah has a goal to issue inspection findings for the LLRW disposal program to the licensee within 30 days following the conclusion of the inspection. The team determined that inspection findings were not issued to the licensee within 30 days for 25 of the 71 inspections. Most of the late reports occurred at the beginning of the review period. At the beginning of the review period, the LLRW Section changed managers. The new manager was not aware of the 30-day timeliness goal. Once the Program self-identified the timeliness goal was being missed, and communicated this to the manager, the

manager immediately started meeting the 30-day timeliness goal for issuing inspection findings.

#### Technical Quality of Inspections

The team evaluated all inspection files which included evaluations of waste acceptance, hydrogeological, radiological, security, and environmental hazards. The team determined that the inspection reports were thorough, complete, consistent, and had sufficient documentation to ensure that licensee performance with respect to health, safety, and security were acceptable. The findings were well-founded, supported by regulations, and were appropriately documented.

A team member accompanied one inspector on July 15-16, 2019. No performance issues were noted during the inspection accompaniment. The inspector was well prepared, and thorough, and assessed the impact of licensed activities on health, safety, and security.

#### Technical Quality of Licensing Actions

The Program completed four license amendment actions during the review period. The team reviewed all licensing actions. The casework represented work of six license reviewers.

Based on the review, the team found that Program's evaluation of licensing actions and license conditions were thorough, complete, consistent, and of acceptable technical quality with health, safety, and security issues properly addressed. The team noted that the Program was not following all the administrative requirements outlined in its LLRW technical procedure for the review of licensing actions including using the appropriate transmittal cover letters or completing checklists. The team discussed this matter with the Program staff and management who agreed to correct this matter in future licensing actions.

#### Technical Quality of Incident and Allegation Activities

The Program did not receive any reportable incidents during the review period. However, the team evaluated two non-reportable incidents and confirmed they were non-reportable. No allegations were received during the review period.

Utah has written procedures for the handling, review, analysis, response, and followup of incidents and allegations.

#### c. Evaluation

The team determined that, except as noted below, during the review period Utah met the performance indicator objectives listed in Section 4.2.a.

- Inspection findings are communicated to licensees in a timely manner.

The current LLRW Section Manager was initially unaware of the requirement to report inspection findings to the licensee within 30 days of the inspection. Once the LLRW Section Manager became aware of the requirement, the timeliness for meeting the 30-day goal improved. The team identified that most of the late inspection reports occurred at the beginning of the review period. For example, in 2019, only one of five inspection reports was issued to the licensee outside the 30-day requirement. In addition, the LLRW Section has also committed to the Governor's office to meet this standard as part of a program improvement plan.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, LLRW Disposal Program, be found satisfactory.

d. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

4.3 Uranium Recovery Program

The objective is to determine if Utah's uranium recovery Program is adequate to protect public health and safety. Five sub-elements are used to make this determination: (1) Technical Staffing and Training; (2) Status of Uranium Recovery Inspection Program; (3) Technical Quality of Inspections; (4) Technical Quality of Licensing Actions; and (5) Technical Quality of Incident and Allegation Activities.

a. Scope

The team used the guidance in State Agreements procedure SA-110, "Reviewing the Non-Common Performance Indicator: Uranium Recovery Program," and evaluated Utah's performance with respect to the following performance indicator objectives:

Technical Staffing and Training

- Qualified and trained technical staff are available to license, regulate, control, inspect, and assess the operation and performance of the uranium recovery program.
- Qualification criteria for new uranium recovery technical staff are established and are being followed or qualification criteria will be established if new staff members are hired.
- Any vacancies, especially senior-level positions, are filled in a timely manner.
- There is a balance in staffing the uranium recovery licensing and inspection programs.
- Management is committed to training and staff qualification.

- Individuals performing uranium recovery licensing and inspection activities are adequately qualified and trained to perform their duties.
- Uranium recovery license reviewers and inspectors are trained and qualified in a reasonable period of time.

#### Status of Uranium Recovery Inspection Program

- The uranium recovery facility is inspected at prescribed frequencies.
- Statistical data on the status of the inspection program are maintained and can be retrieved.
- Deviations from inspection schedules are coordinated between uranium recovery technical staff and management.
- There is a plan to perform any overdue inspections and reschedule any missed or deferred inspections; or a basis has been established for not performing overdue inspections or rescheduling any missed or deferred inspections.
- Inspection findings are communicated to licensees in a timely manner.

#### Technical Quality of Inspections

- Inspections of uranium recovery licensed activities focus on health, safety, and security.
- Inspection findings are well-founded and properly documented in reports.
- Management promptly reviews inspection results.
- Procedures are in place and used to help identify root causes and poor licensee performance.
- Inspections address previously identified open items and violations.
- Inspection findings lead to appropriate and prompt regulatory action.
- Supervisors, or senior staff as appropriate, conduct annual accompaniments of each uranium recovery inspector to assess performance and assure consistent application of inspection policies.
- Inspection guides are consistent with NRC guidance.
- An adequate supply of calibrated survey instruments is available to support the inspection program.

#### Technical Quality of Licensing Actions

- Licensing action reviews are thorough, complete, consistent, and of acceptable technical quality with health, safety, and security issues properly addressed.
- Applicable uranium recovery guidance documents are available to reviewers and are followed (e.g., pre-licensing guidance, regulatory guides, etc.).
- Essential elements of license applications have been submitted and meet current NRC or Agreement State regulatory guidance (e.g., financial assurance, 10 CFR Part 37 equivalent, etc.)
- Uranium recovery license reviewers, if applicable, have the proper signature authority for the cases they review independently.
- License conditions are stated clearly and can be inspected.

- Deficiency letters clearly state regulatory positions and are used at the proper time.
- Reviews of renewal applications demonstrate a thorough analysis of a licensee's inspection and enforcement history.
- Licensing practices for risk significant radioactive materials are appropriately implemented including 10 CFR Part 37 equivalent.
- Documents containing sensitive security information are properly marked, handled, controlled, and secured.

#### Technical Quality of Incident and Allegation Activities

- Uranium recovery incident response, investigation, and allegation procedures are in place and followed.
- Response actions are appropriate, well-coordinated, and timely.
- On-site responses are performed when incidents have potential health, safety, or security significance.
- Appropriate followup actions are taken to ensure prompt compliance by licensees.
- Followup inspections are scheduled and completed, as necessary.
- Notifications are made to the NRC Headquarters Operations Center for incidents requiring a 24-hour or immediate notification to the Agreement State or the NRC.
- Incidents are reported to the NMED.
- Allegations are investigated in a prompt, appropriate manner.
- Concerned individuals are notified of investigation conclusions.
- Concerned individuals' identities are protected, as allowed by law.

#### b. Discussion

At the time of the IMPEP review, the Utah's Uranium Recovery program consists of one active conventional mill license which is also authorized for disposal of 11.e(2) byproduct material, one conventional mill license currently under decommissioning and undergoing groundwater assessment, one conventional mill licensee in stand-by status, and one low level radioactive waste licensee who holds a license for disposal of 11.e(2) byproduct material. Utah does not have any in-situ uranium recovery facilities. The duties and responsibilities for Utah's Uranium Recovery program are assigned to staff within the U Mills/RAM Section.

#### Technical Staffing and Training

The Uranium Recovery program is comprised of six staff members which equals to 5.15 FTE. In addition to support from other technical staff in the U Mills/RAM Section and management oversight, the Uranium Recovery program staff consists of five technical staff: two groundwater hydrologists, one health physicist, and two professional engineers. Currently, there are no vacancies. During the review period, one engineer retired from the Uranium Recovery program and a new engineer was hired in September 2016. The position was vacant for 7 months.

One of the professional engineers has completed the training and qualification requirements for the position in accordance with the Utah training and qualification program equivalent to IMC 1248 and is currently performing inspections associated with dams, disposal cells, and waste disposal. The remaining four technical staff are fully qualified as both license reviewers and inspectors.

#### Status of the Uranium Recovery Inspection Program

Utah performed a total of 227 field inspections during the review period, which included health physics, engineering, groundwater, stormwater, dam safety, disposal cell, and 11.e(2) byproduct material disposal. The team reviewed 49 of the health physics inspection modules, 4 stormwater inspections, 9 11.e(2) disposal inspections, 3 dam safety inspections, 2 disposal cell inspections, 10 effluent inspections, and 17 groundwater inspections. The team determined that Utah completed the uranium recovery inspections in accordance with the frequency in IMC 2801, "Uranium Mill and 11.e(2) Byproduct Material Disposal Site and Facility Inspection Program."

Inspection findings for the uranium recovery disposal program were all communicated by formal correspondence to the licensee within 15-20 days following the inspection and after receipt of lab results.

#### Technical Quality of Inspections

The team evaluated 94 of the 227 inspection files which included health physics, stormwater, disposal, dam safety inspection, disposal cell inspection, effluent reviews, and groundwater inspections. The team determined that the inspection reports were thorough, complete, consistent, and had sufficient documentation to ensure that licensee performance with respect to health, safety, and security were acceptable. The findings were well-founded, supported by regulations, and were appropriately documented.

A team member accompanied two inspectors on June 4 and August 21, 2019. The Program uses a modular approach to perform its inspections. The team observed the performance for the radiological monitoring and the tailings/wastewater modules. No performance issues were noted during the inspection accompaniment. The inspectors were well prepared, and thorough, and assessed the impact of licensed activities on health, safety, and security.

#### Technical Quality of Licensing Actions

For the three conventional mills and one 11.e(2) byproduct material disposal facility, the licensing actions during the review period consisted of license renewals, annual financial assurance updates, compliance monitoring, and post-decommissioning monitoring for groundwater compliance.

The Program completed five licensing actions and multiple licensing reviews during the review period. The team reviewed the five uranium recovery licensing actions which included three license renewals and two license amendments. The team also reviewed

three of the financial assurance update reviews and five of the groundwater monitoring report reviews.

The team determined that the licensing action reviews were thorough, complete, consistent, and of acceptable technical quality with health, safety, and security issues properly addressed. License conditions are clearly stated. In addition, financial assurance documents are updated as required.

#### Technical Quality of Incident and Allegation Activities

The Program did not receive any reportable incidents or allegations during the review period. Utah has written procedures for the handling, review, analysis, response and followup of incidents and allegations.

#### c. Evaluation

The team determined that, during the review period, Utah met the performance indicator objectives listed in Section 4.3.a. Based on the criteria in MD 5.6, the team recommended that Utah's performance with respect to the indicator, Uranium Recovery Program, be found satisfactory.

#### d. MRB Decision

The MRB agreed with the team's recommendation and found Utah's performance with respect to this indicator, satisfactory.

### 5.0 SUMMARY

As noted in Sections 3.0 and 4.0 above, Utah's performance was found to be satisfactory for all the performance indicators reviewed. The team did not make any recommendations.

Accordingly, the team recommended, and the MRB agreed, that Utah be found adequate to protect public health and safety and compatible with the NRC's program. Based on the results of the current IMPEP review, the team recommended, and the MRB agreed, that the next full IMPEP review take place in approximately 4 years, with a periodic meeting in approximately 2 years.



## LIST OF APPENDICES

Appendix A	IMPEP Review Team Members
Appendix B	Inspection Accompaniments

## APPENDIX A

### IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Areas of Responsibility</b>
Lizette Roldan-Otero, NMSS	Team Leader
James Albright, North Carolina	Status of Materials Inspection Program Technical Quality of Inspections Materials Inspector Accompaniments
Jacqueline Cook, Region IV	Team Leader in Training Technical Staffing and Training
Gehan Flanders, Texas	Low Level Radioactive Waste Licensing
Tom Lancaster, NMSS	Uranium Recovery Licensing
Marti Poston-Brown, Region IV	Uranium Recovery Program Uranium Recovery Program Inspector Accompaniments
Kevin Siebert, Washington	Technical Quality of Incidents and Allegations Low Level Radioactive Waste Low Level Radioactive Waste Inspector Accompaniments
Michelle Simmons, Region IV	Technical Quality of Licensing Actions
Duncan White, NMSS	Compatibility Requirements

APPENDIX B

INSPECTION ACCOMPANIMENTS

The following inspection accompaniments were performed prior to the on-site IMPEP review:

Accompaniment No.: 1	License No.: UT 2500453
License Type: Hospital Based HDR	Priority: 2
Inspection Date: 6/19/19	Inspector: SW

Accompaniment No.: 2	License No.: UT 0600485
License Type: Industrial Radiography	Priority: 1
Inspection Date: 6/20/19	Inspector: TB

Accompaniment No.: 3	License No.: UT 2300249
License Type: LLRW	Priority: 1
Inspection Date: 7/15-16/19	Inspector: KC

Accompaniment No.: 4	License No.: UT1900479
License Type: Uranium Mill	Priority: 1
Inspection Date: 6/4/19	Inspector: RJ

Accompaniment No.: 5	License No.: UT1900479
License Type: Uranium Mill	Priority: 1
Inspection Date: 8/21/19	Inspector: DH