



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

April 24, 2023

Brandi O'Brien, Program Manager  
Wyoming Department of Environmental Quality  
Land Quality Division  
200 W. 17th Street, Suite 10  
Cheyenne, WY 82002


SUBJECT: WYOMING PERIODIC MEETING SUMMARY 2022

Dear Brandi O'Brien:

A periodic meeting with Wyoming was conducted on March 23, 2022. The purpose of this meeting was to review and discuss the implementation of Wyoming's Agreement State Program. The Nuclear Regulatory Commission (NRC) was represented by Mary Muessle, Director, Division of Radiological Safety and Security, and Jacqueline D. Cook, Regional State Agreements Officer, from the NRC's Region IV office.

I have completed and enclosed a general meeting summary. If you feel that our comments, conclusions, or actions to be taken do not accurately summarize the meeting discussion, or have any additional remarks about the meeting in general, please contact me at (817) 200-1132 or via email at [Jackie.Cook@nrc.gov](mailto:Jackie.Cook@nrc.gov) to discuss your concerns.

Sincerely,

 Signed by Cook, Jacqueline  
on 04/24/23

Jacqueline D. Cook  
Regional State Agreements Officer  
Division of Radiological Safety and Security

Enclosure:  
Periodic Meeting Summary for Wyoming

WYOMING PERIODIC MEETING SUMMARY 2022 DATED APRIL 24, 2023.

**DISTRIBUTION:**

R. Johnson, NMSS

K. Modes, NMSS

WYOMING PERIODIC MEETING SUMMARY 2022

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

PERIODIC MEETING WITH THE STATE OF WYOMING

TYPE OF OVERSIGHT: NONE

March 23, 2022

Enclosure

## PERIODIC MEETING PARTICIPANTS

### **NRC**

- Mary Muessle: Division Director, Division of Radiological Safety and Security, NRC Region IV
- Jackie Cook: Regional State Agreements Officer, NRC Region IV

### **State of Wyoming**

- Brandi O'Brien: Program Manager, Wyoming Department of Environmental Quality (WDEQ)
- Reid Brown: WDEQ/Uranium Recovery Program (URP)
- Omar Nusair: WDEQ/URP
- Carolyn Coy: WDEQ/Land Quality Division (LQD)
- Cherrie Nelson: WDEQ/URP
- Kyle Wendtland: Administrator, WDEQ/LQD/URP

## 1.0 INTRODUCTION

This report presents the results of the periodic meeting held between the U.S. Nuclear Regulatory Commission (NRC) and the State of Wyoming. The meeting was held on March 23, 2022, and was conducted in accordance with Section V.H.8. of the Nuclear Materials Safety and Safeguards (NMSS) State Agreement (SA) Procedure SA-116, "Periodic Meetings between IMPEP Reviews," dated June 3, 2009. For programs where the agreement only includes non-common indicators (e.g., uranium recovery program or low-level radioactive waste disposal program), the team will review each sub-element independently as a common performance indicator and attribute a rating to each indicator. The Wyoming Agreement State Program is limited to regulatory oversight of uranium recovery facilities.

The Wyoming Agreement State Program is administered by the Uranium Recovery Program which is in the Land Quality Division. The Land Quality Division is part of the Department of Environmental Quality.

At the time of the meeting, the Wyoming Agreement State Program regulated 15 specific licenses authorizing possession and use of 11e.(2) byproduct material and source material involved in the extraction or concentration of uranium or thorium in source material and ores at uranium and thorium milling facilities. The meeting focused on the radioactive materials program as it is carried out under the Section 274b (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Wyoming.

The Program's last Integrated Materials Performance Evaluation Program (IMPEP) review was conducted remotely from March 24-26, 2020. That report is in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession [ML20177A322](#). A Management Review Board (MRB) meeting to discuss the outcome of the IMPEP review was held on September 5, 2019.

During the June 23, 2020, MRB meeting, Wyoming's performance was found to be satisfactory for all performance indicators reviewed. The team did not make any new recommendations.

Accordingly, the team recommended, and the MRB agreed, that the Wyoming Agreement State Program 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 with all performance indicators found satisfactory, the team recommended, and the MRB agreed, that the next full IMPEP review take place in approximately 4 years with a periodic meeting to be held in approximately 2 years.

## 2.0 COMMON PERFORMANCE INDICATORS

The Wyoming Agreement State Program is limited to regulatory oversight of uranium recovery facilities. In accordance with Section V.H.8. of the NMSS SA Procedure SA-100 “Implementation of the Integrated Materials Performance Evaluation Program (IMPEP)” (ADAMS Accession Number ML[20274A147](#)), for programs where the agreement only includes non-common indicators (e.g., uranium recovery program or low level radioactive waste disposal program), the team will 1) review each sub-element independently as a common performance indicator and attribute a rating to each indicator; 2) use the specific guidance for reviewing the non-common performance indicators contained in NMSS Procedures SA-109 “Reviewing the Non-Common Performance Indicator, Low-Level Radioactive Waste Disposal Program” (ADAMS Accession Number ML[20184A085](#)) and SA-110, “Reviewing the Non-Common Performance Indicator: Uranium Recovery Program” (ADAMS Accession Number ML[20245E135](#)); 3) evaluate the indicator Legislation, Regulation, and Other Program Elements as a non-common indicator as specified in NMSS Procedure SA-107 “Reviewing the Non-Common Performance Indicator: Legislation, Regulations, and Other Program Elements” (ADAMS Accession Number ML[20183A328](#)); and 4) determine the overall adequacy and compatibility finding in accordance with the rating attributed to each sub-element as described in MD 5.6.

### 2.1 Technical Staffing and Training (2020 IMPEP Rating: Satisfactory)

The Uranium Recovery Program (URP) is comprised of three fully qualified inspectors and license reviewers (program manager, senior health physicist, and senior hydrogeologist) and two new staff who are not yet qualified as license reviewers or inspectors. Three Land Quality Division staff who will not be trained as URP license reviewers or inspectors also work for the Program. There are 5 full time equivalent for the URP when fully staffed.

Currently, the URP has one vacancy.

The URP has a training and qualification program compatible with NRC’s Inspection Manual Chapter (IMC) 1248, “Qualification Programs for Federal and State Materials and Environmental Management Programs”, Appendices H and I.

### 2.2 Status of the Materials Inspection Program (2020 IMPEP Rating: Satisfactory)

There were 21 total inspections performed since the last IMPEP in 2020. There were 8 overdue inspections ranging from 2 to 6.5 months overdue, mainly delayed due to COVID. Please note that in accordance with Temporary Instruction (TI)-003: *Evaluating the Impacts of the COVID-19 Public Health Emergency (PHE) as Part of the Integrated Materials Performance Evaluation Program*, which state that the performance indicator objective (for inspections that exceed the scheduling window as described in Inspection Manual Chapter 2801, *Uranium Recovery Facilities and 11e.(2) Byproduct Material Facility Inspection Program*, with overdue dates falling inside the defined timeframe of the pandemic, the number of inspections reported should be noted in the report but should not be counted in the calculation of overdue inspections described in SA-101, Appendix A) may be adversely affected by the pandemic and could, under normal circumstances, impact the overall performance indicator rating. Since the overdue inspections appeared to have been outside the Program’s control, they should not be

considered by the IMPEP team while establishing the overall indicator rating. All 8 overdue inspections have been inspected prior to the date of this meeting. Also, there are no inspections currently overdue.

### 2.3 Technical Quality of Inspections (2020 IMPEP Rating: Satisfactory)

The current Program Manager is looking for documentation of inspector accompaniments from calendar year 2020. All inspector accompaniments have been made for 2021. Annual inspector accompaniments are one of the mechanisms Wyoming uses to evaluate performance. Other mechanisms include Uranium Working Group meetings with the industry and regular performance evaluations for all employees.

All inspection reports are reviewed by the program manager prior to being sent to the licensee.

Pandemic restrictions at facilities due to reduced operations were a significant challenge for the URP. One remote inspection was conducted since the last IMPEP review in 2020.

Please note that in accordance with TI-003, inspections of licensed activities focus on health, safety, and security should not be adversely affected by the impacts of the pandemic.

### 2.4 Technical Quality of Licensing Actions (2020 IMPEP Rating: Satisfactory)

Wyoming had 15 specific licensees at the time of this periodic meeting. Wyoming had received 21 licensing action requests since the last IMPEP review in 2020. Those license action requests included 3 restoration/decontamination/decommissioning, 1 completion review report, 10 license amendments, 3 license renewals, 2 change of control, and 2 alternate decommissioning schedules.

Wyoming has four large, complicated, or unusual authorizations for uranium recovery facilities. These are release of Irigaray MU1-9, use of low-pH lixiviant, oxidant, and groundwater protection standards.

### 2.5 Technical Quality of Incident and Allegation Activities (2020 IMPEP Rating: Satisfactory)

At the time of this meeting, Wyoming had no events, generic implications, nor allegations referred by the NRC for action.

## 3.0 NON-COMMON PERFORMANCE INDICATORS

Four non-common performance indicators are used to review Agreement State programs: (1) Legislation, Regulations and Other Program Elements, (2) Sealed Source and Device (SS&D) Evaluation Program, (3) Low-Level Radioactive Waste Disposal (LLRW) Program, and (4) Uranium Recovery (UR) Program. The NRC's Agreement with Wyoming only transfers regulatory authority for UR program to the State of Wyoming; therefore, the first and fourth (which is described in Sections 2.0 through 2.5 above) non-common performance indicators applied to this meeting.

3.1 Legislation, Regulations and Other Program Elements  
(Formerly Compatibility Requirements)  
(2020 IMPEP Rating: Satisfactory)

Wyoming is currently updating the incorporation by reference date to four chapters of the Wyoming regulations for UR (Chapters 3, 4, 5, and 9) which have now been passed.

There are no legislative changes affecting the program.

4.0 SUMMARY

Within the scope of the periodic meeting, no programmatic concerns were noted.

Wyoming is updating their Standard Operating Procedures and updating their guidance documents.

Recently, Wyoming began amending their statues to amend the existing agreement.

Emerging technologies - Wyoming is considering including ablation technology; low-pH lixiviant now in use; novel approaches for plugging and abandonment of wells; and UR companies looking into new well installation techniques.