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

August 12, 2022

Umair A. Shah, MD, MPH
Secretary of Health
101 Israel Road SE
Tumwater, WA 98501

Dear Dr. Shah:

On July 14, 2022, the Management Review Board (MRB) met to consider the results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Washington Agreement State Program. The MRB was comprised of senior managers from the U.S. Nuclear Regulatory Commission (NRC) and an Agreement State. The MRB Chair in consultation with the MRB members found the Washington Agreement State Program adequate to protect public health and safety but needs improvement and not compatible with the NRC's program. Because of the significance of these findings, the MRB Chair determined that the Washington Agreement State Program should enter a period of Heightened Oversight. Heightened Oversight is an increased monitoring process the NRC uses to follow the progress of improvement needed in an Agreement State Program. It involves preparation of a Program Improvement Plan (PIP), bimonthly conference calls, and submission of status reports prior to each call with the appropriate Washington and NRC managers and staff members.

In response to the MRB Chair's decision, the Washington Agreement State Program is requested to submit a PIP within 30 days of receipt of this letter as part of your response to the review team's recommendations and to further support the responses the State provided during the July 14, 2022, MRB meeting. I ask that you have your staff discuss the required elements of this PIP with Mr. Kevin Williams, Director, Division of Materials Safety, Security, State, and Tribal Programs, Office of Nuclear Material Safety and Safeguards, before you submit it to ensure that the planned actions and measures of success are clearly identified. Upon review of the PIP, the NRC staff will acknowledge receipt and approval of the PIP and schedule the first conference call.

The enclosed 2022 IMPEP final report documents the IMPEP team's findings and summarizes the results of the MRB meeting. The MRB Chair found the Washington Agreement State Program satisfactory for four performance indicators; satisfactory, but needs improvement, for three performance indicators; and unsatisfactory for two performance indicators. The MRB Chair agreed that one of the 2018 IMPEP review recommendations should be modified and remain open and agreed to open eight new recommendations. The MRB Chair also directed that a follow-up IMPEP review be conducted in approximately 2 years, for the less than satisfactory indicators, with a periodic meeting for the satisfactory indicators. After the follow-up IMPEP review, the MRB Chair will determine when the next full IMPEP review will be conducted.

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,

Catherine Haney Digitally signed by Catherine Haney
Date: 2022.08.12 14:26:23 -04'00'

Catherine Haney
Deputy Executive Director for Materials, Waste,
Research, State, Tribal, Compliance, Administration,
and Human Capital Programs
Office of the Executive Director for Operations

Enclosure:
Final 2022 Washington Agreement
State Program IMPEP Report

cc w/enclosure:

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SUBJECT: FINAL WASHINGTON AGREEMENT STATE PROGRAM INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM REPORT DATE August 12, 2022

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE WASHINGTON AGREEMENT STATE PROGRAM

March 28-April 1, 2022

FINAL IMPEP REPORT

Enclosure

EXECUTIVE SUMMARY

The results of the 2022 Integrated Materials Performance Evaluation Program (IMPEP) review of the Washington Agreement State Program (Washington) are discussed in this report. The review was conducted in person from March 28-April 1, 2022. In-person inspector accompaniments were conducted September 27-October 2, 2021; October 19-21, 2021; November 2-4, 2021; and November 18, 2021.

Washington's performance was found to be satisfactory for the following four performance indicators: Status of Materials Inspection Program; Sealed Source and Device Evaluation Program; Low-Level Radioactive Waste (LLRW) Disposal Program; and Uranium Recovery Program. Washington's performance was found to be satisfactory but needs improvement for the following three performance indicators: Technical Staffing and Training; Technical Quality of Inspections; and Legislation, Regulations, and Other Program Elements. Washington's performance was found to be unsatisfactory for the following two performance indicators: Technical Quality of Incident and Allegation Activities; and Technical Quality of Licensing Actions.

The team recommended and the Management Review Board (MRB) Chair agreed that one of the two 2018 IMPEP review recommendations be closed (e.g., implementing a technical evaluation report for licensing decisions at the LLRW disposal facility). The team also recommended and the MRB Chair agreed with modifying the remaining 2018 IMPEP review recommendation (e.g., training and qualification requirements). The team made 10 new recommendations. The MRB Chair recommended to combine some of the recommendations, which the team agreed. Therefore, the team made eight new recommendations and the MRB Chair agreed.

Accordingly, the team recommended and the MRB Chair agreed that the Washington Agreement State Program be found adequate to protect public health and safety but needs improvement.

Since the team noted that Washington's program has the potential to create gaps, conflicts, duplication, or other conditions that could jeopardize an orderly pattern in the collective national effort to regulate agreement materials, the team also recommended and the MRB Chair agreed that the Washington Agreement State Program be found not compatible with the NRC's program.

Based on the results of the 2022 IMPEP review and the decline in performance, the team recommended and the MRB Chair agreed that Washington be placed on a period of heightened oversight.

The team recommended and the MRB Chair agreed that in approximately two years, a follow-up IMPEP review be conducted for the less than satisfactory indicators and a periodic meeting be conducted for the satisfactory indicators. After the follow-up IMPEP review, the MRB Chair will determine when the next full IMPEP review will be conducted.

1.0 INTRODUCTION

The Washington Agreement State Program (Washington) review was conducted from March 28-April 1, 2022, by a team of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the States of Minnesota and Texas. Team members are identified in Appendix A. In-person inspector accompaniments were conducted on September 27-October 2, 2021; October 19-21, 2021; November 2-4, 2021; and November 18, 2021. The inspector accompaniments are identified in Appendix B. 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 July 24, 2019. In addition, the team used Temporary Instruction TI-003, "Evaluating the Impacts of the COVID-19 Public Health Emergency as Part of Integrated Materials Performance Evaluation Program (IMPEP)," dated October 21, 2020, to evaluate the impact of the pandemic on Washington's Program. Preliminary results of the review, which covered the period of May 5, 2018-April 1, 2022, were discussed with Washington 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 Washington on August 11, 2021. Washington provided its response to the questionnaire on December 27, 2021. A copy of the questionnaire response is available in the NRC's Agencywide Documents Access and Management System (ADAMS) using the Accession Number ML21362A687.

Washington is administered by the Office of Radiation Protection which is in the Environmental Public Health Division (the Division). The Division is part of the Department of Health (the Department). Organization charts for Washington are available in ADAMS (ML22074A099). The radiation control program is composed of a Radiation Control Program Director (RCPD), a deputy, a radioactive materials section, and a waste section.

Following the Governor's order to have staff work from home in March 2020 due to the pandemic, a State-level management decision was made to reduce their carbon footprint. This decision resulted in Washington staff being vacated from their offices and working from their residences for most of this review period. Washington's staff supported emergency response efforts to the University of Washington (UW) incident that occurred in May 2019 and the pandemic that began in February 2020.

A draft of this report was issued to Washington on May 16, 2022, for factual review and an opportunity to comment (ML22133A227). Washington responded to the draft report by letter dated June 13, 2022 (ML22165A245) from Lauren Jenks, Assistant Secretary for Environmental Public Health. The team developed a comment resolution matrix (ML22181A235) documenting the team's response to Washington's comments (ML22181B128). The Management Review Board (MRB) was convened on July 14, 2022, to discuss the team's findings and recommendations.

At the time of the review, Washington regulated approximately 320 specific licenses authorizing possession and use of radioactive materials. The review focused on the radiation control 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 Washington.

The team evaluated the information gathered against the established criteria for each common and applicable non-common performance indicator and made a preliminary assessment of the Washington's performance. At the time of the exit, the team's preliminary findings were discussed with Washington and found Washington to be adequate to protect public health and safety, but needs improvement, and compatible with the NRC's program. After the team drafted the report and had further discussions, the team revised its original compatibility finding to indicate that Washington be found not compatible with the NRC's program. The RCPD was notified prior to the issuance of the draft report.

2.0 PREVIOUS IMPEP REVIEW AND STATUS OF RECOMMENDATIONS

The 2018 IMPEP review concluded on May 4, 2018. The final report is available in ADAMS (ML18208A461). The results of the 2018 IMPEP review and the status of the associated recommendations are as follows:

Technical Staffing and Training: Satisfactory
Recommendation: Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the NRC Inspection Manual Chapter (IMC)1248 "Formal Qualifications Program for Federal and State Material and Environmental Management Programs" appendices A, B, D, E, H, and I are adopted.

Status: The 2022 IMPEP review team noted that Washington took appropriate corrective actions in revising the training and qualification procedure related to Sealed Source & Device (SS&D) reviewers (Appendix D of IMC 1248). However, all other appendices were not revised or updated to ensure the essential objectives of IMC 1248 were adopted. The team recommended and the MRB Chair agreed that the 2018 recommendation be modified to read as follows:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the IMC 1248 appendices A, B, E, H, and I are adopted.

Status of Materials Inspection Program: Satisfactory
Recommendation: None

Technical Quality of Inspections: Satisfactory
Recommendation: None

Technical Quality of Licensing Actions: Satisfactory, but needs improvement
Recommendation: None

Technical Quality of Incident and Allegation Activities: Satisfactory
Recommendation: None

Legislation, Regulations, and Other Program Elements: Satisfactory, but needs improvement
Recommendation: None

SS&D Evaluation Program: Satisfactory
Recommendation: None

Low-Level Radioactive Waste (LLRW) Disposal Program: Satisfactory
Recommendation: Washington should produce a technical evaluation report that provides the basis for the regulatory decision each time a significant licensing action for the LLRW disposal facility is processed.

Status: Washington incorporated the use of technical memorandums to document the basis for regulatory decisions each time a significant licensing action is processed. Based on the team's review and improvements made by Washington, the 2022 IMPEP review team recommended and the MRB agreed that this recommendation be closed.

Uranium Recovery Program: Satisfactory
Recommendation: None

Overall 2018 MRB finding for Washington: Adequate to protect public health and safety and compatible with the NRC's program.

3.0 COMMON PERFORMANCE INDICATORS

Five common performance indicators are used to review the NRC and Agreement State radiation control 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 assessed. 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 Washington's performance with respect to the following performance indicator objectives:

- A well-conceived and balanced staffing strategy has been implemented throughout the review period.
- 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.
- Agreement State training and qualification program is equivalent to NRC IMC 1248.
- Qualification criteria for new technical staff are established and are followed, or qualification criteria will be established if new staff members are hired.
- 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

Washington's Radioactive Materials Section is currently comprised of 11 full-time equivalents (FTE). Specifically, the Section consists of 1 supervisor, 8 technical staff members, 1 database manager, and 1 administrative staff member. Washington currently has one vacancy. Over the review period four staff members left and nine individuals were hired. Of the nine hired, five were hired from outside the program and four were current employees transitioning to new positions in the Section. For those four staff who left the program, one staff member retired, and three others left to pursue other opportunities. Most vacancies remained open between a few weeks to a few months, with one exception of a position that was vacant for nearly 4 years, from April 2018 until January 1, 2022.

During this review period, the team noted that there was significant management turnover. The Radiation Control Program Director (RCPD) retired in August 2020, and a new RCPD was hired in January 2021. The last long-term supervisor retired prior to the 2018 IMPEP review. During the review period, a total of seven individuals have held the supervisor position. Two were short-term permanent employees with each serving approximately 1.5 years, and the remainder were current employees acting as the supervisor. This continued until the most recent permanent supervisor was hired in December 2021. The team determined that Washington had adequate staffing levels. In addition, Washington implemented strategies to maintain performance and expertise to support the radiation control program.

The team evaluated Washington's training and qualification program for license reviewers and inspectors. Washington divides staff into one of three categories: medical, industrial, and laboratory/academic, and each of these categories has an assigned program lead. The 2018 IMPEP review team found that Washington had a training and qualification procedure in place, but the team determined that it was not compatible with NRC's IMC 1248. As a result, a recommendation was made for Washington to review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the NRC's IMC 1248 appendices A, B, D, E, H, and I were adopted. Washington revised their training procedure during the 2022 IMPEP review and provided the final approved revision to the team on March 31, 2022. The team reviewed Washington's current training and qualification procedure and found that even though Washington had completed their revision while the team was on site, it remained not compatible with IMC 1248. For example, the team found Washington's:

- current training and qualification procedure appendices did not align with the appendices in IMC 1248. It also consisted of only a two-to-three-page table where the staff member could document courses they had taken, when they had taken them, as well as an area to document completion of any inspections or license reviews where they had participated or led as part of the qualification process. The team noticed that Washington's procedure did not include the remainder of the requirements found in the appendices to IMC 1248.
- standard approach to on-the-job training was based on a "see one, do one; teach one, lead one" approach as identified in its training and qualification procedure. The team observed in different areas of the program that while this abbreviated approach quickly qualified staff, it also resulted in the inconsistent application of processes as well as performance issues which were identified in other performance indicators.
- procedure did not contain a requirement for inspectors to successfully complete NRC's Root Cause/Incident Investigation Workshop (G-205) or for inspectors and

license reviewers to successfully complete NRC's Advanced Health Physics Course (H-201), prior to qualification. The team also found that both inspectors and license reviewers had been qualified (resulting in license reviewers having signature authority) without having successfully completed either the NRC Inspection Procedures Course (G-108) or G-109. The team found that there were instances in both the licensing and inspection qualification process where qualification was granted without core courses having been completed.

At the time of the on-site review, the team noted that staff met the refresher training requirements for the first 24 months from the beginning of the review period and still had 2 more months to complete the next 24-month cycle. At the time of the on-site review, Washington's radioactive material section had inspectors that could perform inspection and licensing activities for which they were assigned but were not qualified to conduct other activities such as well-logging inspections as such there were no license reviewers or inspectors fully qualified in all disciplines. The IMPEP team interviewed license reviewers and inspectors. During the interviews, the staff indicated several concerns with the assignments and training. Staff informed the team that they were not aware of the assignments that were made. Staff also noted that program leads made unilateral changes to established procedures and did not convey those changes to the staff or provide training on the procedural changes.

The staff reported to the team that some of the inspectors and license reviewers exempted each other from having to take entry level NRC training classes due to their educational backgrounds. These staff level exemptions were granted and noted in the staff's respective qualification journals without management's awareness and prior to management's approval. The new training qualification procedure allows for only the supervisor to grant these exemptions. The team noted that there was no documentation or process for justifying these staff exemptions. These staff level exemptions were verified through discussions with staff and management, and a review of available records. During the on-site week, the Deputy Director provided justifications for these exemptions and approved these exemptions, resolving the issue regarding inspectors and license reviewers exempting each other from having to take entry level NRC training classes. The team reviewed and agreed with the Deputy Director's justifications. The team also noted that staff were assigned independent licensing reviews by program leads prior to having successfully completed the required training (e.g., NRC's Licensing Procedures Course (G-109)).

The team was informed that the supervisor used to conduct monthly staff meetings and would set aside an hour to discuss a predetermined technical topic. Staff used these trainings and NRC required training courses to fulfill the refresher training requirement (24 hours of training in 24-months) in IMC 1248. However, the turnover in this supervisory position led to reduced training opportunities.

c. Evaluation

The team determined that during the review period, Washington did not meet all the performance indicator objectives. For example:

- Some vacancies, especially senior-level positions, were not filled in a timely manner.
- The Agreement State's training and qualification program was not equivalent to IMC 1248.

The team found that there was significant turnover in supervisory position during the review period. Since the last permanent supervisor retired prior to the 2018 IMPEP review (on July 1, 2017), a total of seven individuals held the supervisor position with only two being short-term permanent employees and the remainder as employees in acting supervisory roles. The team found that the routine turnover in the supervisor position contributed to Washington not being able to meet the performance indicator objectives described above. The team found that this routine turnover in the supervisor position resulted in inconsistent leadership which contributed in part, to inconsistencies and technical errors as noted in various program areas across the section and which were identified throughout the review.

Washington had not made progress since the 2018 IMPEP review to improve their training procedures. Therefore, the team concluded that Washington's training and qualification program was not equivalent to NRC's IMC 1248.

Washington's training and qualification procedure for the license reviewers and inspectors should be revised to be consistent with IMC 1248 to ensure that all required core and specialized training courses, individual self-study activities, and on-the-job training activities are successfully completed prior to qualifying staff to work independently as an inspector or license reviewer. The revision should consider the appropriate NRC courses such as NRC's G-108 or equivalent, and NRC's G-109 or equivalent; and NRC's G-205 for inspectors and NRC's H-201 for inspectors and license reviewers as appropriate.

Washington indicated that in some instances, they qualified staff without having successfully completed the required training because staff had not been selected for the required training courses. The team reviewed the training requests from Washington and determined that when multiple staff applied for the same in-person class, only one was selected in accordance with NRC procedure SA-600, *Process and Criteria for Agreement State Personnel to Attend NRC-Sponsored Training*. For this review period, the NRC offered multiple courses and noted that Washington staff were selected 46 times for 21 classes. These 46 staff approvals were made for both in-person and virtual training classes. Based on the team's analysis, the team was not able to support Washington's assertion on lack of access to training courses as a basis for qualifying staff without completing the required training.

The 2018 IMPEP team made the following recommendation:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the IMC 1248 appendices A, B, D, E, H, and I are adopted.

The team noted that Washington took appropriate corrective actions in revising the training and qualification procedure related to SS&D reviewers (Appendix D of IMC 1248). As a result, the team concluded that the recommendation issued during the 2018 IMPEP review should be modified as follows:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the IMC 1248 appendices A, B, E, H, and I are adopted.

The team reviewed Section III.B.3 in MD 5.6 regarding consideration of a finding unsatisfactory but considered the strategies Washington implemented during the review

period, such as:(a) staff with science degrees were hired; (b) only one vacancy remained open at the time of the on-site IMPEP review; (c) staff were attending training classes; (d) refresher training was being completed; and (e) the supervisor position was filled by temporary acting supervisors until a permanent supervisor could be hired. As a result, the team determined that Washington's performance be satisfactory but needs improvement and noted that there was little or no management attention to address staffing and training issues, and the training and qualification training procedure was not compatible (repeat from 2018 IMPEP review).

Based on the criteria in MD 5.6, the team recommended that Washington's performance with respect to the indicator, Technical Staffing and Training, be found satisfactory but needs improvement.

d. MRB Chair's Determination

The MRB Chair agreed with the team's recommendation and found Washington's performance with respect to this indicator satisfactory but needs improvement.

3.2 Status of Materials Inspection Program

Inspections of licensed operations are essential to ensure that activities are being conducted in compliance with regulatory requirements and consistent with good safety and security practices. The frequency of inspections is specified in IMC 2800, "Materials Inspection Program," and is dependent on the amount and type of radioactive 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 SA-101, "Reviewing the Common Performance Indicator: Status of the Materials Inspection Program," and evaluated Washington'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 prescribed frequencies (https://www.nrc.gov/materials/miau/mat-toolkits.html).
- 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.
- Candidate licensees working under reciprocity are inspected in accordance with the criteria prescribed in IMC 2800 and other applicable guidance or compatible Agreement State Procedure.
- 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

For this indicator, the team reviewed the inspections that were due during the review period and reviewed a sampling of inspection reports. During the review period Washington performed 179 Priority 1, 2, 3, and initial inspections and conducted three

Priority 1, 2, 3, and initial inspections overdue. Washington performed inspections at the same frequency as NRC for the priority 1, 2, 3, and initial inspections.

A sampling of 22 inspection reports indicated that 2 of the inspection findings were communicated to the licensees beyond Washington's goal of 30 days after the inspection exit or 45 days after the team inspection exit. One was 5 days late and the other was 4 months late.

Washington's criteria for performing reciprocity inspections were 20 percent of candidates. During this review period, Washington met its goal in 2018 at 26 percent and in 2019 at 30 percent. However, due to issues from the pandemic, Washington completed 5 percent in 2020 and 13 percent in 2021. The team noted that TI-003 states, in part, candidate licensees working under reciprocity are inspected in a manner that differs from the criteria prescribed in IMC 2800, and other applicable guidance or compatible Agreement State Procedure, should not adversely affect the overall rating of this indicator while the Program continued to maintain protection of public health and safety. The team did not identify any health and safety impacts that would affect the overall rating for this indicator.

During the review period, there was a contamination event associated with a removal of a cesium blood irradiator at the University of Washington (UW) Research & Training building where the licensee operating under reciprocity conducted grinding and cutting activities on the source holder. As a result of the UW incident, Washington's corrective actions included revising their reciprocity procedure to add a section to address unique operations such as blood and self-shielded irradiator source removals. Washington added procedures for granting reciprocity activities to include detailed review of the license, proposed work plan, and compliance history. Additionally, Washington inspectors committed to be on-site to observe reciprocity licensees engaged in pre-procedure, or dry run activities related to irradiator source installations, exchanges, and removals. Washington added observations of dry-runs after prompted by the IMPEP team member conducting inspector accompaniments. These commitments will be added to the reciprocity procedure which is undergoing revision. The team observed the procedural and process changes during a subsequent source removal which was selected for an inspector accompaniment as part of IMPEP.

c. Evaluation

The team determined that during the review period, Washington met all the performance indicator objectives.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Washington's performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

d. MRB Chair's Determination

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

3.3 Technical Quality of Inspections

Inspections, both routine and reactive, provide reasonable 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 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 Washington'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 compatible with NRC guidance.
- An adequate supply of calibrated survey instruments is available to support the inspection program.

b. Discussion

The team reviewed inspection records, enforcement documentation, and interviewed inspectors involved in 23 of the 413 materials inspections conducted during the review period. The inspection records sampled represented work from five current and former staff. The casework reviewed included inspections that covered medical, industrial, commercial, academic, research, and service provider licenses for initial, routine, special and reciprocity inspections.

Team members accompanied five radioactive material inspectors on six inspection trips that included nine inspections conducted during the weeks of September 27, 2021, and October 25, 2021. The inspections included activities associated with industrial radiography, gamma knife, high dose rate (HDR) remote afterloader, nuclear medicine therapy and diagnostic imaging, and reciprocity inspections of two service providers involving an irradiator disposal and installation. The team observed that the inspectors:

- maintained good rapport with licensees;
- displayed adequate knowledge of regulations and license conditions, except for physical protection of risk-significant radioactive materials;
- used inspection guidance documents to perform inspections;
- used calibrated survey instruments to perform independent and confirmatory measurements with one exception; and,
- identified deficiencies that help improve licensee programs.

However, during the inspector accompaniments, inspectors did not take advantage of opportunities to perform or observe the following available inspection activities:

- observe a gamma knife procedure,
- observe radiography at a temporary job site,
- observe security alarm testing,
- review licensee safety and security self-assessments,
- review dosimetry records,
- review more than one written directive,
- follow-up on a nuclear medicine therapy treatment rather than a diagnostic treatment,
- open a special inspection after hearing a licensee state a misinterpretation of security regulations during a radiological survey, and
- observe an irradiator movement dry run until prompted by the IMPEP team.

The team informed the inspectors of security issues related to the physical protection of category 1 and 2 quantities of radioactive material during use and had the inspectors notify the licensee. The team concluded that these opportunities to perform or observe certain activities can be addressed through increased supervisory inspector accompaniments.

Agreement State inspection policies, procedures, and guidance should be consistent with NRC policies, procedures, and guidance including IMC 2800. Washington's current *Radioactive Material Section Standard Operating Procedure*, Revision 6, dated September 9, 2021, had been in a draft format since approximately 2018. IMC 2800 requires supervisors to promptly review all inspection results. Washington's procedure only required supervisory reviews of 10 percent of inspection records. This incompatible standard resulted in supervisory reviews being performed on only 4 of 23 inspection records (17 percent) and only 2 of 15 inspection records with findings (13 percent). This conflict with IMC 2800 guidance was identified during the 2018 IMPEP review and persisted through the current IMPEP review.

Washington inspectors used inspection checklists to assist in conducting broad-based regulatory reviews that included necessary focus elements. Out of the 23 inspection records reviewed, 15 of the inspections included items of non-compliance. The inspectors were able to identify issues, but the team noted that items of non-compliances did not include specific details of why the non-compliance occurred, the duration of the non-compliance, or the number of examples found.

The *Radioactive Material Section's Standard Operating Procedure* provided similar language to IMC 2800 regarding the identification and review of the root causes of findings and poor licensee performance. However, the process employed by Washington for documenting and issuing deficiencies and infractions on inspection forms only required the inspectors to list the regulation or license condition that was violated and did not require the licensee to describe or document why the violation occurred or any associated root causes. In addition, licensee responses to notices of infractions or deficiencies that described corrective actions were routinely accepted without a description of actions taken or planned to avoid further non-compliance as requested on the inspection records.

Based on the inspector accompaniments and interviews with the inspectors, the team determined that inspectors consistently performed reviews of previous items of non-compliance for closure. However, the inspectors typically did not document the

basis for closing previous items of non-compliance. Examples could include: (1) The inspector verified that the licensee implemented a procedure change and conducted staff training in response to the violation; or (2) The inspector verified that the licensee performed alarm tests to correct the violation and placed the requirement to perform annual alarm tests on an electronic calendar.

IMC 2800 requires inspection branch chiefs to evaluate the performance of each inspector during actual inspections at least once per year. During the 2018 IMPEP review, the team found that Washington did not perform supervisory accompaniments of all inspectors annually throughout the review period. This trend continued during the current IMPEP review. Following the 2018 IMPEP, all inspector accompaniments were performed. However, in 2019, of the five inspectors, two supervisory accompaniments were not performed and three were performed but not documented. In 2020, of the five inspectors, three supervisory accompaniments were performed and documented, one supervisory accompaniment was not performed, and one was performed but not documented. In 2021, one supervisory accompaniment was not performed. The team noted that a senior inspector was not accompanied by a supervisor for 2019, 2020, and 2021.

The team verified that Washington maintained an adequate supply of appropriate and calibrated survey instruments to support the inspection program and to respond to radioactive materials incidents. However, the team noted one example where an inspector used an instrument that was overdue for calibration by several days.

c. Evaluation

The team determined that during the review period, Washington did not meet all the performance indicator objectives. For example:

- Based on the inspector accompaniments, the team observed some isolated examples where inspections of licensed activities did not focus on health, safety, and security.
- Based on the casework reviewed, inspection findings were well-founded but in some cases were not properly documented in reports.
- Management reviewed 10 percent of the inspection results and the reviews were not always timely.
- A draft procedure was used for a majority of the review period, and inspectors were not able to effectively use the draft procedure to identify root causes of poor licensee performance.
- Supervisors, or senior staff as appropriate, did not conduct annual accompaniments of each inspector to assess performance and assure consistent application of inspection policies.

The team observed during the inspector accompaniments that there were a few opportunities for improvement. One inspector reviewed one written directive and relied on a verbal response from the licensee that there were no medical events. Some inspectors did not review dosimetry reports to assess trends. Some inspectors did not ask to review the annual radiation protection program reviews, radiation safety committee minutes, or in the case for Category I and II licensees, the annual security self-assessments.

The team requested inspection records for all inspector accompaniments performed as part of this IMPEP review. There were two inspection records that had not been

completed even though inspections were conducted in September and December 2021. The inspector provided the licensee with the results of the inspection at the conclusion of the inspection, but the completion of the inspection record was still pending.

Based on interviews with inspectors and management, there appeared to be some confusion regarding the difference between routine inspections, technical assistance visits, and observations and surveillances. Washington inspectors who observed the cesium blood irradiator source removal activity at the UW Research & Training building (incident described in Section 3.5 of this report) did not open an inspection but were there for observation and surveillance. There was no inspection documentation to review because this was not an inspection. Washington inspectors told the team there was no clear process for documenting or addressing any findings they may have observed. One of the inspector accompaniments was an observation and surveillance (See Appendix B in the report). During this activity, Washington informed the team that there would be no documentation even though issues with physical security were observed.

Based on the casework reviewed, the team noted an instance where an inspector used an out of calibration survey instrument during an inspection. The team noted inspectors did not include specific details of why the non-compliance occurred, the duration of the non-compliance, or the number of examples found. The team noted that inspection records cited the regulation or license condition, but did not address the specifics (e.g., length of time being in non-compliance, and number of examples). The team noted that Washington accepted licensee's responses to notices of infractions or deficiencies without descriptions of the licensee's corrective actions. The team also noted an instance where an inspector used an out of calibration survey instrument during an inspection.

Based on the inspector accompaniments and interviews with the inspectors, the team determined that inspectors consistently performed reviews of previous items of non-compliance for closure. However, in some cases, the inspectors did not document the basis for closing previous items of non-compliance.

The team identified that Washington's quality assurance (QA) policy of requiring supervisory reviews of 10 percent of inspection records was not consistent and compatible with the IMC 0610.

The team noted that the current *Radioactive Material Section Standard Operating Procedure*, Revision 6, dated September 9, 2021, had been in a draft format since approximately 2018. Based on the team's findings associated with this indicator, the procedure was not useful in assisting the inspectors to be successful. The procedure should address, at a minimum, the following:

- Inspection preparation should include a review of previous items of non-compliance, a review of any incidents or allegations that need follow-up, and a review of SS&D registration, if applicable.
- Inspection records are properly documented within 30 days for a routine inspection and 45 days for a team inspection.
- All inspection records are reviewed by management.
- Special inspections are clearly defined.
- Infractions, deficiencies, and items of non-compliance are clearly defined.
- Inspection records include documentation that provides the basis for closing previous items of non-compliance and or other actions taken by the licensee to prevent recurrence.

- Observation and surveillance, if used, should be clearly defined, and there should be a formalized means to prepare for and document inspections, observations, and items of non-compliance, as necessary.
- Annual supervisory inspector accompaniments are conducted to identify and address inspector performance issues.

The team noted that annual supervisory accompaniments of each inspector were not conducted during the review period to assess performance and assure consistent application of inspection policies.

The team made one new recommendation:

Washington should revise their *Radioactive Material Section Standard Operating Procedure*, and train staff on the revised procedure.

Overall, the team concluded that the performance issues were not programmatic and dealt with more than a few, but less than most of the inspector accompaniments. The inspectors were finding items of non-compliance and inspection documentation was adequate, but the draft procedure in use needed revision. Therefore, the team concluded that Washington's performance needed improvement.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Washington's performance with respect to the indicator, Technical Quality of Inspections, be found satisfactory but needs improvement.

d. MRB Chair's Determination

The MRB Chair agreed with the team's recommendation and found Washington's performance with respect to this indicator satisfactory but needs improvement.

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, implementation of those procedures, and documentation of communications and associated actions between the Washington 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 SA-104, "Reviewing the Common Performance Indicator: Technical Quality of Licensing Actions," and evaluated Washington'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., pre-licensing guidance, Title 10 *Code of Federal Regulations* (10 CFR) Part 37, financial assurance, etc.).
- 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 the physical protection of Category 1 and Category 2 quantities of radioactive material (10 CFR Part 37 equivalent).
- Documents containing sensitive security information are properly marked, handled, controlled, and secured.

b. Discussion

During the review period, Washington performed approximately 1,000 radioactive materials licensing actions. Washington maintained a database for licensing work products and guidance. Washington's procedure noted that licenses would be renewed every 5 years.

The team evaluated a sample of 22 licensing actions: 3 new applications, 9 amendments, 3 renewals, 3 terminations, 2 notifications of change of control, and 2 financial assurance reviews. The team evaluated casework which included the following license types and actions: broad scope, medical diagnostic and therapy, industrial radiography, research and development, academic, nuclear pharmacy, gauges, decommissioning actions, financial assurance, and service providers. The casework sample represented work from 11 current and former license reviewers. The licensing reviewers conduct inspections in their respective areas of assigned licensing: laboratory, industrial, and medical.

In 4 of the 22 licensing actions reviewed, the team found licensing actions to be thorough, complete, consistent, and of high quality with health, safety, and security issues properly addressed. License tie-down conditions were stated clearly and were supported by information contained in the file. Deficiency letters clearly stated regulatory positions, were used at the proper time, and identified deficiencies in the licensee's documents. Terminated licensing actions were well-documented and showed appropriate transfer and survey records. For medical licenses, Washington's review of preceptor attestations was found to be thorough.

The team identified inconsistencies in 18 of the 22 licensing actions reviewed. For example:

- License templates and written license conditions differed from the NUREG-1556 guidance documents and will need to be corrected:

  - Washington's portable gauge license template was used by all license reviewers and was used to train new license reviewers. This template had a maximum activity exceeding the allowable maximum activity noted on the SS&D registration. Therefore, portable gauge licenses were generated with the incorrect maximum activity allowances and portable gauges that were not requested. The team noted that the QA review missed identifying these discrepancies.
  - Washington's portable gauge licenses were issued with additional portable gauge models not requested by the licensee or applicant. This practice was consistent with Washington's licensing procedure.
  - Washington's gauge license was renewed with incorrect maximum activities, contrary to the SS&D registration maximum activity limits, but also contained the

incorrect portable gauge model and two x-ray fluorescence analyzers that were not requested by the licensee on the renewal application. The team noted that these errors had been historically carried on the license since the previous renewal. The team noted that in the renewal application, the Radiation Safety Officer emphasized the licensee only had three use/storage locations, yet Washington listed four locations on the renewal license, and one of the four locations was not written to match what the renewal application specified.

- Washington's two radiopharmacy licenses were renewed with molybdenum-99/technetium-99 for license condition 6, rather than listing them as separate line items. License Condition 7 required the chemical and/or physical form, but Washington listed "Any Mo-99/Tc-99 generator which has been manufactured, labeled, packaged and distributed in accordance with a specific license issued by the U.S. NRC or an Agreement State." This was not in accordance with Appendix B, NUREG-1556 Volume 13, Revision 2 (March 2019) *Program-Specific Guidance About Commercial Radiopharmacy Licenses*. The team also noted that this was not what the licensees requested. The team further identified that the radiopharmacy template used by Washington also contained this same error.

- Non-standard license conditions:

  - The team identified the use of non-standard license conditions on templates used by Washington license reviewers, as well as on the issued licenses. The use of non-approved non-standard license conditions may affect the licensing process by creating conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis. The use of non-standard conditions is addressed further in Section 4.1 of this report.

- Guidance Review and QA Checklists:

  - The team identified a licensing action that was completed but found no documentation in the file indicating that the licensee made this request. The QA review did not identify this missing piece of information.
  - Although Washington has a QA checklist for every licensing action, the team noted multiple instances where the QA checklist was either not fully completed or incorrectly completed. For example, key QA component line items were missing (e.g., verification of SS&D review, verification that previous inspection and enforcement history was reviewed, and verification that the application was signed by an individual authorized to legally sign for the licensee).
  - The QA checklist also contained a line "IS HAND DELIVERY NEEDED?" This practice of hand-delivering licenses was discouraged following the 2015 Government Accountability Office Audit and discussed in RCPD letters RCPD-17-001 dated January 18, 2017, and RCPD-17-005 dated June 6, 2017, and a more recent General Accounting Office initiative. The 2018 IMPEP review noted that Washington had a policy to hand deliver the license during the pre-licensing site visit but committed to stopping this practice. The team noted that Washington had ceased this practice but had not updated their QA checklist to ensure that no licenses are hand delivered at pre-licensing site visits.
  - The team reviewed a 2021 renewal for an industrial radiography license. The team noted that the QA checklist was dated 2004 and contained an incorrect Washington Radioactive Materials regulation reference. The 2021 renewal license was subsequently issued from this 2004 renewal checklist.

- Reviews of licensing files did demonstrate that Washington was in possession of the correct checklists (e.g., pre-licensing checklist for risk-significant radioactive materials (RSRM)). However, the team noted a problem with the implementation. For example, a few had no boxes checked or completed with the applicable information, or were filled in or checked incorrectly (e.g., not applicable when it was applicable). The QA reviewer did not identify the discrepancies and approved the review.

- Protection of Sensitive and Security-Related Information in the transmittal of Radioactive Materials License to Licensee:

  - The draft *Radioactive Material Section Standard Operating Procedure* did not contain guidance for electronic transfers of sensitive security-related documents. Washington license reviewers informed the team that once a license action is complete, Washington emails the licenses to the licensees and sends the licenses via regular mail. For licenses that authorize risk-significant radioactive materials (e.g., category 1 and 2), Washington does not take any other precautions in transmitting this sensitive information. Washington legal counsel informed license reviewers that it was acceptable to send licenses without password protection or encryption. Staff could not recall the exact date of this approved practice and the team was not provided with a written record of this legal counsel decision. The team noted that this was not an acceptable practice. A random review of licenses that authorize Category 1 and 2 quantities of radioactive material were properly marked as containing sensitive information. But the transmission to the licensees was not in compliance with the current practice for protection of sensitive information.

- New Licensing Staff training and signature authority:

  - Washington qualified license reviewers for portable gauge signature authority prior to the license reviewer successfully completing the G-109 training course and being trained on and given full access to the SS&D registry. The team noted this was not an isolated incident, but a programmatic issue in that three license reviewers were granted signature approval for portable gauge licenses without attending the required training courses. The team noted that one of the topics discussed at the G-109 course is to ensure compliance with the SS&D registry.

c. Evaluation

The team determined that during the review period, Washington did not meet all the performance indicator objectives. For example:

- Based on the casework reviewed, most licensing action reviews were not thorough, complete, consistent, and of acceptable technical quality with health, safety, and security issues properly addressed.
- Some license reviewers should not have had signature authority for the cases they reviewed independently because they did not successfully complete the required training courses.
- Based on the casework reviewed, license conditions were not always consistent with NRC's standard license conditions.
- Based on the casework reviewed, reviews of renewal applications did not always demonstrate a thorough analysis of a licensee's inspection and enforcement history.
- Applicable guidance documents were not always being followed (e.g., license

templates, NUREG-1556 licensing guidance).
- Documents containing sensitive security information were not always properly handled and controlled.

The team noted discrepancies between license applications and the information in the issued licenses. For example, Washington added additional activity to the radioactive material requested by the licensee or applicant on portable gauge licenses; added different portable gauge models to licenses even though not requested by the licensee or applicant; added a location of use that was not requested by the licensee. The team noted that Washington used non-standard license conditions; did not verify the proper signature authority; did not review the licensee's inspection and enforcement history as part of a renewal review; and transmitted sensitive security-related information without encryption or password protection to licensees. In addition, Washington qualified license reviewers to have signature authority without attending the required training. These issues were not identified by the Washington's QA reviews.

Washington developed templates and checklists but did not compare them to NRC's NUREG-1556 licensing guidance to ensure that reviews were thorough, complete, consistent, and of acceptable technical quality with respect to health, safety, and security. If Washington continues using the existing templates and checklists, these templates and checklists need to be revised to ensure an orderly pattern of licensing consistent with the licensing guidance. Washington should revise the QA review process to perform a comprehensive and thorough review that is consistent with the licensing guidance. Staff will need to be trained on the updated, revised documents.

Washington's licensing procedure was revised on January 3, 2022, in response to the 2018 IMPEP review recommendation. Based on the team's findings, this procedure will need to be revised again to address the issues described above.

As a result of this review, the team will make three new recommendations:

1. Washington should perform an extent of condition review across all licensing categories by performing a smart sampling of licenses issued since May 4, 2018, to:

   (a) ensure that maximum possession limits are accurate and in accordance with applicable licensing guidance (e.g., applicable SS&D registration);
   (b) ensure that only the radioactive material requested by the licensee remains on the license (such as, remove additional gauge models placed on the license by Washington);
   (c) ensure that locations of use and storage are accurate;
   (d) ensure that license reviewers considered the licensee's inspection and enforcement history for license renewal reviews; and
   (e) revise the license templates to be consistent with NRC's licensing guidance.

2. Washington should revise their licensing procedure to be compatible with NRC's NUREG-1556 licensing guidance. The revised licensing procedure should also include a periodic assessment or audit to review a smart sampling of completed licensing actions to ensure proper issuance of licenses in accordance with the appropriate NUREG-1556 volume.
3. Washington should revise their *Radioactive Material Section Standard Operating Procedure* to provide guidance for electronic transfers of sensitive security-related documents.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Washington*'s* performance with respect to the indicator, Technical Quality of Licensing Actions, be found unsatisfactory.

d. MRB Chair's Determination

The MRB Chair agreed with the team's recommendation and found Washington's performance with respect to this indicator unsatisfactory.

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, safety, and security. An assessment of incident response and allegation investigation procedures, actual implementation of these procedures internal and external coordination, timely incident reporting, and investigative and follow-up actions, are a significant indicator of the overall quality of the incident response and allegation programs.

a. Scope

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

- Incident response 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 follow-up actions are taken to ensure prompt compliance by licensees.
- Follow-up inspections are scheduled and completed, as necessary.
- Notifications are made to the NRC Headquarters Operations Center (HOC) 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) and closed when all required information has been obtained.
- Allegations are investigated in a prompt, appropriate manner.
- Concerned individuals are notified within 30 days of investigation conclusions.
- Concerned individuals' identities are protected, as allowed by law.

b. Discussion

During the review period, 109 incidents were reported to Washington. At least 45 were related to radiation monitor alarms at scrap yards or disposal facilities; approximately 30 were calls from citizens with unwanted radioactive items or other radiation concerns; and 5 were allegations. Of the 109 incidents, 38 were reported to NMED. The team evaluated 10 incidents reported to NMED and 4 incidents that were not reported. The 14 radioactive materials incidents reviewed included 5 lost or stolen radioactive materials, 1 potential overexposure, 4 damaged equipment, 2 leaking sources, 1 transportation event, and 1 contamination event. Washington dispatched inspectors for on-site follow-up for four of the cases reviewed. Of the 14 incidents the team reviewed, 2-non-reported incidents should have been reported to NMED. These incidents are described below.

When notified of an incident, a staff member was assigned to follow-up with the person reporting the incident and made all decisions regarding follow-up and closure of the incident. In most cases reviewed, there was no documentation that showed management involvement, although Washington's procedure stated that "Section/department/program management shall promptly assess the preliminary information received concerning the incident and will determine if a reactive inspection is necessary." Incidents which required immediate or on-site responses sometimes involved management and staff discussion of the incident to determine the appropriate level of response, based on both the circumstances and the health and safety significance of the incident. The team found that Washington's evaluation of incident notifications and its response to incidents was generally well balanced with respect to radiation safety significance.

The team found two examples of incidents which should have been reported to NMED but were not reported to NMED. The first was a scrap yard alarm due to improper disposal of unknown radioactive material by a Federal licensee. The second was a waste disposal site alarm due to improper disposal of iodine-131 contaminated cat litter from an unlicensed animal boarding facility. A cat was treated at a licensed veterinary facility and released into the custody of its owner who then placed the cat into a boarding facility. Although Washington staff stated that they contacted the licensed veterinary facility to pick up the cat litter returned to the boarding facility, there was no documented follow-up with the licensed veterinary facility to determine if all release criteria were followed, including proper instruction to the owner. There was no follow-up to confirm that the waste returned from the waste disposal facility was retrieved from the unlicensed animal boarding facility and returned to the licensed veterinary facility. In addition, the team noted that most incidents were closed in NMED, including those that may have required a follow-up inspection to review the implementation of required corrective and preventive actions. Although Washington stated that inspectors are supposed to search the incident database to identify any incidents occurred prior to inspecting a licensee, the team was unable to find any documentation of such review of the implementation of corrective and preventive actions.

In general, the team found that documentation of the review of incidents was brief and, in some cases, did not contain information that was supportive of the violations (or lack thereof) issued. One involved a gauge that was damaged while in use. Documentation included issuing a violation for leaving the gauge unattended and not secured; however, there was nothing in the investigation that indicated the gauge was left unattended. That information was noted only in the corrective action letter submitted by the licensee in response to the violation.

One of the incidents reviewed was the contamination incident that occurred in 2019 (at the UW Research & Training building) when a sealed source containing multiple curies of cesium-137 (Cs-137) was breached during removal of the source for disposal and prior to placement in a shipping cask. The team focused on the activities performed by Washington: (1) responding to the two staff members contaminated during the incident, and (2) responding to the incident.

- On the night of the event, two Washington inspectors were on-site to "observe" (explained as observation and surveillance, a term used for a non-routine inspection that does not involve a response to an incident (which is referred to as an "investigation")). The two inspectors were unknowingly contaminated by the breached source prior to leaving the site that night. Following the observation, the two inspectors, stopped for dinner on the 2-hour drive back to the office, and were

notified of the potential contamination sometime after the stop. Although the official joint inspection report notes that the two individuals were contaminated and that decontamination activities were performed by Washington, there is no documentation of the method(s) of decontamination, the equipment used, the choice of location of decontamination, the criteria considered acceptable, or the levels of contamination of the individuals or the vehicle. Dose assessment of the two Washington inspectors was not documented other than a reference on two slides used in public presentations, which stated that two State persons were among the contaminated persons and a whole-body scan was done of each. In addition, although documentation referred to surveys performed of the location where they stopped to eat, there was no documentation of the equipment used, criteria, survey, or wipe results other than "background levels."

- The overall response by Washington to the UW contamination incident appeared to be in two main phases: emergency response and monitoring. The emergency response was primarily conducted by the Radiological Emergency Preparedness Section and any other available health physics staff from other sections, from the night of the incident through transfer of the breached source off-site. The monitoring of activities was conducted by the site licensee, the contractor licensee who breached the source, other contractor licensees responding to the event, and federal responders from the U.S. Department of Energy and other agencies. Based on discussion with Washington, the emergency response for the two contaminated Washington inspectors and the on-site response was timely, thorough, and technically well done. However, most of the information about the emergency response was not documented. Monitoring activities by Washington were described as like the activities they would normally perform during routine inspections; and various regulatory activities were performed such as issuance of licenses by the Radioactive Air Emissions Section and a letter releasing the site for unrestricted use following submission of the documentation by the licensee. Although both the site licensee and the contractor licensee each provided a report of the events on the night of the breach, which included dose assessments of contaminated persons involved for whom they were responsible, no such report or other documentation was prepared by Washington. Even though Washington had two inspectors at the UW Research & Training building, there was no inspection report generated.

The team also evaluated Washington's reporting of incidents to the NRC's Headquarters Operations Officer (HOO). The team noted that in each case requiring HOO notification, Washington reported the incidents within the required time frame. The team verified that, for those incidents not requiring HOO notification, Washington did not need to notify the HOO and Washington did follow their incident procedure.

During the review period, 10 allegations were received by Washington. Of these five were referred by the NRC, four were received by Washington, and one was listed and investigated as an incident. Washington was able to provide documentation for 3 of the 10 allegations to the team. The team evaluated two allegations that the NRC referred to Washington and one which was listed as an incident. For the two allegations referred by the NRC to Washington, the team noted there was no documentation of closure in the Washington files, although the NRC records indicated the allegations were closed, including a brief statement of the Washington review. For the one allegation that was tracked and investigated only as an incident, Washington closed the investigation, but had no documentation to close the allegation. In addition, there was no documentation indicating Washington provided the results of their investigation to the alleger or the NRC for those referred during the review period.

The team reviewed Washington's incident response and allegation procedures to determine if appropriate procedures were in place and were followed. The team was provided the draft document *Radioactive Materials Section Standard Operating Procedures*, Revision, 6, September 2021 and reviewed the section "Incidents and Allegations." The team made the following assessment:

- The team found that the Washington procedure described one process in the section "Incidents and Allegations" that was used for both incidents and allegations, and that this process did not require some of the actions necessary for properly handling of allegations commensurate with NRC's MD 8.8, *Management of Allegations*. Washington's procedure did not require protection of alleger identity and did not include details of the allegation process (e.g., methods of intake, alleger identity protection, processing the received allegation, allegation evaluation, and allegation closure).
- The team found that Washington's procedure required that all incidents/allegations be documented in a local database and on a local drive under incidents. However, the team requested to review five allegations, of which documentation for only two were found for review in the allegation database and one was listed as an incident. The team noted that Washington was not following their procedure.
- The team noted that Washington's procedure incorrectly indicates that all credible incidents/allegations will also be sent to NMED. Allegations should not be sent to NMED.
- The team noted that Washington's procedures required inspectors to adequately prepare for an inspection by reviewing any outstanding open items and determining whether any events had been reported by the licensee. The team could not determine if inspectors performed an NMED search as part of their inspection preparation.
- The team noted that Washington's procedures did not require follow-up with licensees to verify the implementation of corrective actions. The team could not verify these actions were performed because there was no documentation in the file (see Section 3.3 of this report).

c. Evaluation

The team determined that during the review period, Washington did not meet all the performance indicator objectives. For example:

- Allegation procedures were in place and followed but was missing key elements.
- Response actions were not always appropriate, well-coordinated, and timely.
- On-site responses were not always performed when incidents had potential health, safety, or security significance.
- Appropriate follow-up actions were not always taken to ensure prompt compliance by licensees.
- Follow-up inspections were not scheduled and completed, as necessary.
- Incidents were reported to NMED but closed without all required information.
- Due to limitations in obtaining written records, the team could not validate allegations were investigated in a prompt, appropriate manner.
- Concerned individuals were not always notified within 30 days of investigation conclusions.
- Washington's allegation procedure did not require the protection of concerned individuals' identities, as allowed by law.

The team noted that without documentation, the team could not confirm that appropriate follow-up actions were taken to ensure prompt compliance by licensees. Follow-up inspections were not scheduled and completed, as necessary (e.g., improper disposal of unknown radioactive material and improper disposal of iodine-131 contaminated cat litter). None of the incidents or allegations reviewed included any discussion of scheduling of follow-up inspections.

Washington informed the team that the National Nuclear Security Administration and Triad National Security, LLC, joint investigation report was the official documentation for the UW incident. However, since the inspectors did not return to the UW Research & Training building for decontamination but underwent decontamination at a personal residence, these actions were not included in the joint investigation report. The team determined that Washington's response to the UW incident did not document the actions taken by Washington's inspectors (e.g., decontamination, bioassays, doses, surveys, waste generated/disposed, etc.). The team was not provided any documentation such as after-action report or inspection record. The team concluded that the actions taken were acceptable, but there was no documentation of the decontamination or dose assessment. The team noted that inspectors were informed that their doses were low, but they did not have a written record of their actual doses. Even though the team informed Washington ahead of the IMPEP review that the UW incident would be a focus, Washington did not make available the information related to the assessment of the contamination and doses to the inspectors for this significant incident.

The team determined that Washington's incident response and allegation procedures were in place and followed; however, the allegation procedure did not include all required elements. For example, the procedures did not address the need to protect the alleger's identity, methods of intake, processing the received allegation, issuing acknowledgment letters to the alleger, and closure documentation.

The team determined that two incidents were not reported to NMED. These two incidents involved improper disposal of licensed material by an NRC licensee and a Washington licensee. Both incidents were not entered into NMED, not referred to the NRC for follow-up with the Federal licensee, and not followed up with the Washington licensee.

The team could not verify if alleger's identities were protected and if they were provided the results of Washington's investigation within 30 days of investigation conclusions. The team noted Washington's procedures did not contain a requirement to protect the alleger's identity and provide them the results of the investigation.

As a result of this review, the team will make three new recommendations:

1. Washington should document the actions they took in response to the UW contamination incident in 2019. These include actions taken and basis for release at a personal residence, a restaurant and with a state vehicle. The written report should document the dose assessments (e.g., external dosimetry, urinalysis, and whole-body scans) of the two contaminated inspectors involved in the incident.

2. Washington should revise their allegation and incident procedures to include all necessary actions (e.g., require protection of alleger identity as allowed by law, ensure proper and complete documentation of the receipt and closure of incidents and allegations, ensure that follow-up inspections are scheduled and completed,

ensure allegations are properly maintained with allegations and not mixed with incidents, and ensure that allegations are documented and easily retrievable).

3. Washington should locate all allegation records received during the review period and assess whether appropriate closure actions were taken; and verify that the allegation files were complete, accurate, and documented in the tracking system.

The team noted that Washington's performance declined since the last IMPEP review in more than a few, but less than most cases. The team reviewed the criteria for a finding of unsatisfactory but noted that (1) the incident procedure was compatible with most of the criteria, and the allegation procedure was compatible with some, but not all criteria; (2) staff implemented the procedure, and the level of effort was commensurate with the potential significance in most cases; (3) program responses were conducted by knowledgeable staff in most of the cases reviewed; (4) follow-up inspections were not scheduled and/or completed in most of the cases reviewed; (5) results of allegations investigations were not provided to known allegers; and (6) alleger identities were not required to be protected.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Washington's performance with respect to the indicator, Technical Quality of Incident and Allegation Activities, be found satisfactory, but needs improvement. However, the MRB Chair determined the information presented in the report and discussed during the MRB supports a finding of unsatisfactory. Discussion during the MRB highlighted problems associated with the minimal documentation for the UW incident, the brief documentation for the other incidents, the missing documentation for 7 of the 10 allegation files, and the associated procedure being not compatible. Therefore, the MRB Chair determined that Washington's performance be found unsatisfactory.

d. MRB Chair's Determination

The MRB Chair found Washington's performance with respect to this indicator unsatisfactory.

4.0 NON-COMMON PERFORMANCE INDICATORS

Four non-common performance indicators are used to review Agreement State programs: (1) Legislation, Regulations, and Other Program Elements; (2) SS&D Evaluation Program; (3) LLRW Disposal Program; and (4) Uranium Recovery Program. The NRC relinquished regulatory authority for these non-common performance indicators. These four non-common performance indicators were reviewed by the IMPEP team.

4.1 Legislation, Regulations, and Other Program Elements

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 State's agreement with the NRC. The statutes must authorize the State to promulgate regulatory requirements necessary to provide reasonable assurance of adequate 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. The 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 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 Program Element Table indicating the Compatibility Categories for those program elements other than regulations can be found on the NRC website at the following address: https://scp.nrc.gov/regtoolbox.html.

a. Scope

The team used the guidance in SA-107, "Reviewing the Non-Common Performance Indicator: Legislation, Regulations, and Other Program Elements," and evaluated Washington'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 of 1954, 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, "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, 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

The Washington Agreement State Program's current effective statutory authority is contained in Revised Code of Washington (RCW) 70A.388 "Nuclear Energy and Radiation." The Office of Radiation Protection is designated as the State's radiation control agency. The Radioactive Materials and Waste Management Section is located within the Office of Radiation Protection. The radiation control program is implemented by Washington Administrative Code, Title 246, Chapters 240 through 254. No legislation affecting the radiation control program was passed during the review period.

Washington's administrative rulemaking process takes approximately 6 to 12 months from drafting to finalizing a rule. Washington creates a draft rule and forwards it to rule coordinators in the Office of the Assistant Secretary, Division of Environmental Public Health, for review. Once the review is completed, the draft rule is sent to the Assistant Attorney General for a legal review. Once the legal review is completed, the draft rule is sent to the NRC for a 'proposed' regulation review. 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 Office of the Assistant Secretary of State, Division of Environmental Public Health. The draft rule is

forwarded to the Office of Code Revisor Order Typing Service where it is officially formatted, typed, and filed. A public hearing and comment period is scheduled and held. Comments are considered and resolved, as appropriate, and 31 days after filing, the rule becomes effective. The final rule is then forwarded to the NRC for a final regulation review. The team noted that the State's rules and regulations are not subject to "sunset" laws.

Washington can adopt the NRC amendments using the 'exception' rulemaking process. The Secretary of Health delegated the responsibility to the Assistant Secretary to sign 'exception' rule packages. Most rule packages associated with NRC regulation amendments meet the requirements of the 'exception' rule package. Washington uses a rulemaking intake form Code Reviser (CR) 102 to coordinate and develop their regulations. The form includes linked references to NRC State Communications Portal, NRC's Regulation Toolbox, State Agreements procedures, and State Regulation Review Coordinators contact information.

During the review period, Washington submitted six proposed regulation amendments, no final regulation amendments, and no legally binding requirements or license conditions to the NRC for a compatibility review. Two of the amendments were overdue for State adoption at the time of submission.

At the time of this review, the following two amendments were overdue:

- Medical Use of Byproduct Material (RATS ID 2018-1) – Medical Event Definitions, Training and Experience, and Clarifying Amendments, 10 CFR Parts 30, 32 and 35, 83 FR 33046, due for adoption by January 14, 2022.
- Miscellaneous Corrections (RATS ID 2018-2) – Organizational Changes 10 CFR Parts 37, 40, 70, and 71, 83 FR 57231, due for adoption by December 21, 2021.

During this review period, responsibility for regulation reviews was transferred from one staff member to another and this caused delays. The new staff member submitted six proposed amendments. Of the two overdue amendments, RATS 2018-1 was submitted March 7, 2022, and RATS 2018-2 was submitted on November 17, 2021. Neither of the proposed amendments met their due dates for State adoption. RATS ID 2018-1 should have been adopted by January 14, 2022, and RATS ID 2018-2 should have been adopted by December 21, 2021. The team noted that RATS ID-2018-1 was a lengthy, complex amendment because it dealt with the medical regulations which have a potential for cross jurisdictional boundary issues.

Regarding other program elements, the team noted that Washington's procedures were not compatible with IMC 1248, IMC 0610, NUREG-1556 licensing guidance, and MD 8.8 as described earlier in this report (see Sections 3.1, 3.3, 3.4, and 3.5). The team also noted that Washington used non-standard license conditions which had not been submitted to the NRC for a compatibility review.

c. Evaluation

The team determined that during the review period Washington did not meet all the performance indicator objectives. For example:

- The Agreement State program had the potential to create conflicts, duplications, gaps, or other conditions that jeopardize an orderly pattern in the regulation of radioactive materials under the Atomic Energy Act of 1954, as amended.

- Regulations adopted by the Agreement State for purposes of compatibility or health and safety were adopted later than 3 years after the effective date of the NRC regulation.
- Other program elements, as defined in SA-200 that had been designated as necessary for maintenance of an adequate and compatible program, had not been adopted and implemented within 6 months of NRC designation.

Washington's *Radioactive Material Section Standard Operating Procedure*, Revision 6, dated September 9, 2021, had been in a draft format since approximately 2018 and was not compatible with IMC 2800.The team noted that Washington's training and qualification procedure was identified as not compatible during the 2018 IMPEP review. Washington provided several drafts to the team during the on-site week and the team concluded that the procedure was still not compatible. Washington's supervisor was required to review 10 percent of the inspection records, whereas IMC 0610 requires a 100 percent review. Washington was not following the NUREG-1556 series licensing guidance. Washington was using the correct RSRM and pre-licensing guidance checklist, but implementation was not complete. Washington's allegation procedure did not require protection of alleger identity and did not include details of the allegation process (e.g., methods of intake, alleger identity protection, processing the received allegation, allegation evaluation, and allegation closure). These performance issues have the potential to create conflicts, duplications, gaps, or other conditions that jeopardize an orderly pattern in the regulation of radioactive materials under the Atomic Energy Act of 1954, as amended.

The team noted that two regulations amendments 2018-1 and 2018-2 were not adopted by the Agreement State within 3 years, as required. Washington informed the team that a public meeting was scheduled for April 12, 2022. Washington informed the team that they expected that five of the six regulation packages including one of the late packages RATS 2018-2 will be approved and made effective on June 13, 2022; if there are no significant public comments. As a result of this review, the team will make a new recommendation and revise the recommendation from the 2018 IMPEP review:

- Washington should perform a review of all their license conditions, identify non-standard license conditions, and submit the non-standard license conditions to the NRC for a compatibility review.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Washington's performance with respect to the indicator, Legislation, Regulations, and Other Program Elements, be found satisfactory, but needs improvement.

d. MRB Chair's Determination

The MRB Chair agreed with the team's recommendation and found Washington's performance with respect to this indicator satisfactory but needs improvement.

4.2 SS&D Evaluation Program

Adequate technical evaluations of SS&D designs are essential to ensure that SS&Ds will maintain their integrity and that the design is adequate to protect public health and safety. NUREG-1556, Volume 3, "Consolidated Guidance about Materials Licenses: Applications for Sealed Source and Device Evaluation and Registration," provides information on conducting the SS&D reviews and establishes useful guidance for teams. In accordance with MD 5.6, three sub-elements: Technical Staffing and Training,

Technical Quality of the Product Evaluation Program, and Evaluation of Defects and Incidents Regarding SS&D's, are evaluated to determine if the SS&D program is satisfactory. Agreement States with authority for SS&D evaluation programs who are not performing SS&D reviews are required to commit in writing to having an SS&D evaluation program in place before performing evaluations.

a. Scope

The team used the guidance in SA-108, "Reviewing the Non-Common Performance Indicator: Sealed Source and Device Evaluation Program," and evaluated Washington's performance with respect to the following performance indicator objectives:

Technical Staffing and Training

- A well-conceived and balanced staffing strategy has been implemented throughout the review period.
- Qualification criteria for new 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.
- Management is committed to training and staff qualification.
- Individuals performing SS&D evaluation activities are adequately qualified and trained to perform their duties.
- SS&D reviewers are trained and qualified in a reasonable period of time.

Technical Quality of the Product Evaluation Program

- SS&D evaluations are adequate, accurate, complete, clear, specific, and consistent with the guidance in NUREG-1556, Volume 3.

Evaluation of Defects and Incidents

- SS&D incidents are reviewed to identify possible manufacturing defects and the root causes of these incidents.
- Incidents are evaluated to determine if other products may be affected by similar problems. Appropriate action and notifications to the NRC, Agreement States, and others, occur in a timely manner.

b. Discussion

Technical Staffing and Training

Washington had three staff qualified to perform SS&D reviews. At the time of the review, Washington lost one reviewer and was in the process of training a current staff member to be fully qualified to perform SS&D evaluations. Currently, there were no vacancies. Washington had a training program for SS&D reviewers equivalent to the NRC training requirements listed in the IMC 1248, Appendix D. The team interviewed staff involved in SS&D reviews and determined that they were familiar with the procedures used in the evaluation of sources and devices and had access to applicable reference documents. The team noted that all the qualified SS&D reviewers with signature authority have a Bachelor of Science degree in engineering or physical/life sciences. The team determined that Washington had adequate staffing levels and expertise to support the SS&D evaluation program.

Technical Quality of the Product Evaluation

Washington had 12 SS&D licensees. Washington currently has 27 active SS&D registrations. There were two SS&D actions that occurred during the IMPEP review period including one new action and one amendment. The team noted that the reviews were of acceptable technical quality and consistent with NUREG-1556, Volume 3, Revision 1.

Evaluation of Defects and Incidents Regarding SS&Ds

There were no incidents related to defects involving devices registered by the State of Washington that were reported during the review period. Incident procedures were in place for such SS&D related incidents. Washington understood the importance of periodically reviewing NMED reports to capture generic issues that may arise related to SS&D related incidents.

c. Evaluation

The team determined that during the review period Washington did meet all the performance indicator objectives.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Washington's performance with respect to the indicator, SS&D Evaluation Program, be found satisfactory.

d. MRB Chair's Determination

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

4.3 LLRW Disposal Program

The objective is to determine if Washington LLRW disposal program is adequate to protect public health and safety, and the environment. 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 SA-109, "Reviewing the Non-Common Performance Indicator: Low-Level Radioactive Waste Disposal Program," and evaluated Washington'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, non-compliances, 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.
- 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.
- 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 fingerprinting orders (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, 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 follow-up actions are taken to ensure prompt compliance by licensees.
- Follow-up inspections are scheduled and completed, as necessary.
- Notifications are made to the NRC HOC for incidents requiring a 24-hour or immediate notification to the Agreement State or NRC.
- Incidents are reported to the NMED and closed when required information is obtained.
- 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

Washington regulates two LLRW facilities. U.S. Ecology, for LLRW disposal and Perma-Fix Northwest, Inc. (PFNW), for a commercial LLRW processing facility. The U.S. Ecology LLRW disposal facility is authorized to dispose of the Class A, B, and C LLRW from members of the Northwest and Rocky Mountain Compacts. The PFNW facility has two separate licenses: one for mixed waste processing and the other for low-level radioactive waste processing.

Technical Staffing and Training

During the reviewed period, Washington had two qualified LLRW staff, the manager and one staff health physicist. Washington also had one engineer, one hydrologist and one administrative assistant equaling 2.7 FTE for the LLRW program. The manager and technical staff had diversified backgrounds in health physics, engineering, and general sciences. The team found that the educational backgrounds of the staff generally met or exceeded that necessary to perform licensing and inspection activities. Currently Washington had two vacancies. During the review period, one staff left the program, and one staff was hired. Generally, any vacant positions were open for only a few weeks to a few months depending on the availability of viable candidates. The team determined that Washington had adequate staffing levels and expertise to support the LLRW disposal program.

The team found that Washington's training and qualification program was not compatible to IMC 1248, Appendix E. IMC 1248, Appendix E, required inspectors and license reviewers to demonstrate detailed knowledge of inspection or licensing discipline specific references prior to being qualified. Washington relied on their own procedure WMS 102, "Staff Qualifications and Training," which described the process to become qualified to perform licensing, inspection, and investigation activities. The team reviewed the staff training records and noted that Washington followed a performance-based "learn, do, and be reviewed" approach to qualification. For staff to become a qualified inspector, Washington required them to be accompanied by a qualified inspector on at least one inspection, conduct at least two inspections under the observation of a qualified inspector, and then obtain approval from the manager. To become a qualified

licensing reviewer, staff needed to complete at least one major licensing action. The team noted that this abbreviated approach to quickly qualify staff resulted in qualifying staff before they completed their required training courses and self-study reading lists. This approach did not prepare the staff to be fully successful in performing independent inspections and license reviews. Washington's procedure required self-study as part of the initial training (e.g., read the documents listed in Attachment 2 reading list). The team was not provided documentation showing completion of this self-study portion of the training. The team concluded that Washington's procedure did not fully meet the requirements of IMC-1248, Appendix E. The team noted that Washington should revise their training and qualification requirements WMS 102 for LLRW inspectors and license reviewers to ensure completion of self-study reading lists and specialized training courses prior to being fully qualified and approved by management. This would make the training qualification process compatible with IMC1248.

Washington's WMS 102 procedure required that all technical staff complete a minimum of 24 hours of refresher training over a 2-year interval. However, the team learned through interviews that this was not being completed for new staff.

A qualification journal was used to track training progress and qualification status. The journal listed the basic training applicable to any position type and included both NRC core and specialized courses that were required to be completed for staff performing inspections or licensing. Washington was about to qualify a staff member who had not completed the required training courses. The team emphasized the need for new staff to complete all requirements during the qualification process.

Status of LLRW Disposal Inspection Program

During the review period, Washington performed 21 annual and 6 surveillance inspections at the PFNW facility. In 2020, four inspections were performed remotely, and in 2021, three inspections were performed remotely.

During the review period, Washington also performed 13 annual and 10 surveillance inspections at the U.S. Ecology LLRW site. In 2020, due to pandemic restrictions, two inspections were performed as described by the staff as partially remote. A partially remote inspection was conducted with one staff member in the field performing activities, and other staff members in the office asking questions and directing the on-site staff member's activities. The team determined that Washington completed the LLRW inspections in accordance with the NRC's inspection frequency identified in IMC 2800.

Technical Quality of Inspections

The team evaluated 50 inspection files which included inspection field checklists and inspection summary documents, inspection procedures, and follow-up on previous inspection findings. These findings included regulatory actions taken. 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 was acceptable. The findings were well-founded, supported by regulations, and were appropriately documented. Annual supervisory accompaniments were performed as required except for one accompaniment in 2021 that was not completed due to the pandemic. The team noted that TI-003 states, in part, supervisory accompaniments of all qualified inspectors may not be able to be performed in each calendar year impacted by the pandemic. These impacts were outside the Washington's control and would not affect the overall indicator rating.

On October 19, 2021, the team accompanied two inspectors at PFNW; one inspector was fully qualified and was identified as the lead inspector, and one inspector was in training and not fully qualified. During this accompaniment, the team observed the inspectors review the perimeter of the facility (e.g., fences), tour the facility, perform select surveys and verify postings. The inspectors reviewed, in part, records related to the licensee's internal monitoring/bioassay and respiratory protection programs, and a discussion of a forklift fire that occurred on June 9, 2021, in the low-level non-thermal building. The facility inspection also included, in part, the mixed waste non-thermal, low-level radioactive non-thermal, and low-level thermal storage yards, and a site boundary radiation survey. The inspector covered the scope of the inspection with the licensee and followed up on the status of the previously identified items of non-compliance. The inspector performed independent surveys during the facility tour but did not include them in the inspection report.

On October 20 and 21, 2021, the team accompanied the same two inspectors at the LLRW disposal facility. During this accompaniment, the team observed the inspector review site security and trench inspections, the licensee's auditing programs, a shipment of Class A unstable waste, and facility postings. During the licensee entrance meeting, the lead inspector did not fully cover the scope of the inspection with the licensee. The inspector was not clear on what items would be covered during the inspection and what items would be covered in future inspections. The team observed one inspector using an incorrect survey probe when performing an independent radiation survey of a shipment of Class A unstable waste. After discussing these issues with the supervisor and the inspector, the Section updated WMS 310, "Routine Inspection Procedure," dated March 15, 2022, to address technical issues discussed during the inspector accompaniments.

Technical Quality of Licensing Actions

The team observed that Washington's files were placed in cardboard boxes and located in several hallways and a storage room at the time of the on-site review. Washington indicated that they do not have a permanent storage location. Without a centralized and dedicated storage location, the team noted the hardship placed on license reviewers and inspectors to review license files to complete licensing actions and prepare for inspections. The team noted that Washington would work on the floor or a makeshift desk to review licensing actions. Washington management informed the team that they would have a permanent storage location for their files, but not in the near future.

Washington completed nine licensing amendments for PFNW during the review period and the team reviewed all these amendments. The review team concluded that the licensing actions were complete, consistent, and of acceptable quality.

Washington was in the process of completing a renewal for the LLRW disposal facility that had been pending for more than one year due to the pandemic. Since this action was not complete, the team did not review this action.

During the 2018 IMPEP review, the team recommended Washington produce a technical evaluation report that provides the basis for the regulatory decision each time a significant licensing action for the LLRW disposal facility is processed. During the current review period, Washington generated a technical memo to document what was reviewed, how it was reviewed, and the basis for the licensing decisions. The team reviewed the memo and noted that it addressed all necessary factors, however, the team noted that this same memo could have been used to also support the review of

another licensing action for the other PFNW license. This other licensing action had an incomplete memo in the file.

Technical Quality of Incident and Allegation Activities

During the review period, Washington was informed of one transportation incident related to a shipment from another State to PFNW and six incidents pertaining to PFNW. The team reviewed all seven incidents. There was no release of radioactive material to the environment. For the two incidents where workers were exposed to contamination, Washington dispatched inspectors. There was one incident that was required to be reported to NMED. The other incidents were not required to be reported to NMED. The team reviewed Washington's response to each incident and noted that the response to each incident was appropriate, well-coordinated, and timely.

There were two allegations reported to Washington during the review period and the team reviewed both allegations. Washington followed their procedures for the handling, review, response, and follow-up of incidents and allegations.

Washington investigated the LLRW allegations promptly, and in an appropriate manner. Concerned individuals were notified of investigation conclusions. Concerned individuals' identities were protected, as allowed by law.

For LLRW incidents and allegations, Washington followed their procedures for the effective handling, review, response, and follow-up on LLRW incidents and allegations.

c. Evaluation

The team determined that during the review period Washington did not meet all the performance indicator objectives. For example:

- Qualification criteria for new LLRW technical staff were established but were not compatible with IMC 1248, Appendix E.

Based on the team's findings, Washington's abbreviated qualification process was not compatible with IMC 1248, Appendix E. The team observed performance issues during the inspector accompaniments which may have been attributed to the shortened training process. Washington needs to ensure that their staff complete self-study reading lists and specialized training courses prior to being fully qualified and approved by management.

The 2018 IMPEP team made the following two recommendations:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the IMC 1248 appendices A, B, D, E, H, and I are adopted.
- Washington should produce a technical evaluation report that provides the basis for the regulatory decision each time a significant licensing action for the LLRW disposal facility is processed.

Since the 2022 IMPEP team identified that the self-study reading list and specialized training were not completed, the team recommended retaining the 2018 recommendation but modify it to read as follows:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the IMC 1248 appendices A, B, E, H, and I are adopted.

The team determined that Washington should revise their training and qualification procedure (WMS 102) for LLRW inspectors and license reviewers to ensure completion of self-study reading lists and specialized training courses prior to being fully qualified and approved by management. The team also recommended that the second recommendation from the 2018 IMPEP review be closed because Washington incorporated the use of technical memorandums to document the basis for regulatory decisions each time a significant licensing action is processed.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommended that Washington's performance with respect to the indicator, Low-Level Radioactive Waste Disposal Program, be found satisfactory.

d. MRB Chair's Determination

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

4.4 Uranium Recovery Program

The objective is to determine if Washington's uranium recovery Program is adequate to protect public health and safety, and the environment. 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 SA-110, "Reviewing the Non-Common Performance Indicator: Uranium Recovery Program," and evaluated Washington'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, non-compliance, 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.
- Essential elements of license applications have been submitted and meet current NRC or Agreement State regulatory guidance (e.g., financial assurance, 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 fingerprinting orders (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 follow-up actions are taken to ensure prompt compliance by licensees.
- Follow-up inspections are scheduled and completed, as necessary.
- Notifications are made to the NRC HOC for incidents requiring a 24-hour or immediate notification to the Agreement State or the NRC.
- Incidents are reported to the NMED and closed when required information is obtained.
- 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, Washington has one licensed conventional mill site, the Dawn Mining Company (DMC). This site is currently undergoing decommissioning and reclamation.

Technical Staffing and Training

Washington has one manager, three technical staff and an engineer who served as the subject matter expert in geotechnical engineering. This totals 3.0 FTE for uranium recovery licensing, inspections, and technical reviews. In October 2021, Washington hired a hydrogeologist to support the Uranium Recovery Program. At the time of the review, two of the three technical staff were assigned to the Uranium Recovery Program as the license reviewers/inspectors. One staff member was fully qualified as a license reviewer/inspector and one staff was in training. At the time of the review, there were no vacancies. The team determined that Washington had adequate staffing levels and expertise to support the Uranium Recovery Program.

The team reviewed Washington's WMS 102. This procedure was used to train and qualify staff as technical license reviewers and inspectors. This procedure required all the NRC core courses listed in the IMC 1248, Appendices H and I. Washington also required their staff to review the NUREG-1620 "Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978," as part of their qualification process.

The team determined that the staff currently qualified as technical license reviewer and inspector had not completed all the NRC core/required courses listed in the IMC 1248, Appendices H and I. The manager qualified the staff member even though the staff had not completed the G-205 and H-201 in accordance with WMS 201, "Licensing Procedure." The team determined that staff completed the reading materials specified in WMS 201, but the completion was not documented. The team informed Washington that staff should not be fully qualified if they have not completed the required and specialized training courses, performed the required on-the-job training, and completed the self-study reading lists and approved by management.

Staff met the refresher training requirements in IMC 1248 during the review period.

Status of the Uranium Recovery Inspection Program

During the review period, Washington performed 62 inspections at the DMC site which included four annual radiation safety inspections and 58 field inspections. The field inspections were performed whenever there were decommissioning, reclamation, or construction activities being conducted by the licensee, or there was a need to evaluate the site condition. The team determined that Washington completed inspections in accordance with the frequency established in the IMC 2801, "Uranium Mill and 11e.(2) Byproduct Material Facility Inspection Program." There were no overdue inspections at the time of the review.

During the review period, all inspection findings were communicated to the licensee within 30 days of the exit. The findings were issued via a letter. The manager reviewed and approved all letters and inspection reports.

Technical Quality of Inspections

The inspectors followed procedures WMS 310, "Routine Inspection Procedure," and WMS 320, "Inspection of U-Mills Reclamation & Construction Projects," NRC's NUREG-1620 "Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978," and NRC's NUREG-1623 "Design of Erosion Protection for long term Stabilization" for DMC site inspections. In addition, the inspectors used a DMC site specific checklist to document the results of the annual radiation safety inspections. The completed checklist became the inspection report for each inspection. Each inspection report also included a "Follow-Up Inspection Summary Form" that listed each finding from previous inspections, including licensee's corrective actions and closure date. For field inspections, the inspectors used a "Routine Field Inspection form" or a "Millsite Routine Surveillance form" to document inspection results and provide detailed documentation for all observations made during the field inspections, including the comments.

The team evaluated all annual radiation safety inspections completed during the review period (four total). The annual radiation safety inspections covered all aspects of the uranium recovery and radiation safety program in accordance with the DMC license. The inspection casework included inspection reports and correspondence with the licensee. Additionally, the team reviewed 15 of the 58 field inspection reports. The inspection reports included sufficient information to support the inspection findings, contained the appropriate level of detail, and were approved and signed by the manager. The inspection casework also showed that staff routinely conducted independent environmental sampling and inspected areas crucial to uranium recovery such as those associated with the environmental monitoring program and reclamation activities.

Based on the review of the 19 inspection reports and interviews with staff, the team determined that the non-compliance findings during the review period were properly identified and clearly communicated with the licensee, and corrective actions were properly identified and enforced.

The team determined that supervisory accompaniments of the qualified inspector was conducted during the review period in 2018 and 2019. Supervisory accompaniment was not conducted in 2020 and 2021 due to the pandemic. This was documented in a memo and/or the inspector accompaniment form by the manager. The team noted that TI-003 states, in part, supervisory accompaniments of all qualified inspectors may not be able to be performed in each calendar year impacted by the pandemic. These impacts were

outside the Washington's control, with no health and safety impacts, and would not affect the overall indicator rating.

On November 18, 2021, the team accompanied staff on an inspection of the DMC site. Overall, the inspector demonstrated good performance-based inspection skills. The inspector was well prepared and used a properly calibrated instrument. During the inspection, the inspector interviewed workers, verified compliance with approved procedures and performed independent verification surveys. The inspector held entrance and exit interviews with the licensee management and technical personnel and communicated the scope of the inspection and findings clearly. The inspector demonstrated adequate knowledge of the site conditions and requirements of the license. The team also encouraged the inspector to check the licensee's visitor logbook to see if any visitor had entered the restricted area and how the licensee followed their procedure for visitors. The team mentioned that independent surveys could be used to verify licensee's surveys and wipe tests.

Technical Quality of Licensing Actions

Washington used WMS 201 to review uranium recovery licensing actions. During the review period, Washington completed one renewal and three amendments for the DMC license. The team reviewed the renewal and three license amendments. The DMC renewal application was submitted on April 4, 2019. Washington completed its review of the renewal action and issued the renewed license on February 5, 2020. The technical license reviewer used a DMC site-specific license review checklist to document completeness of the review. In addition to the license, license renewal application, and the license review checklist, the license renewal documentation package also included the license reviewer's technical analysis documentation on the engineering and hydrologic evaluations, correspondence between the license reviewer and the licensee, and all other supporting documents associated with the license renewal.

The three amendments reviewed involved the termination of occupational radiation exposure monitoring in 2020, Radiation Safety Officer change in 2020, and inconsistency between submittal dates for DMC mill site closure cost estimate in 2020. For the three amendments, the license reviewers created technical memos detailing the decision analyses.

Based on the review of the licensing renewal and amendments, the team determined that the licensing work was complete and of acceptable technical quality. Health, safety, and environmental issues were properly addressed when applicable. The license reviewers documented sufficient information to support the decisions. QA reviews by another qualified license reviewer were conducted and documented in accordance with WMS 201. The licenses and transmittal letters were reviewed and signed by the manager. Conditions added to the licenses were clear and can be inspected.

During the review period, Washington also conducted several technical reviews for the DMC license. These reviews were conducted outside the license amendments but were crucial to the oversight of the reclamation activities at the DMC site. The team reviewed two of these technical reviews, which included DMC monitoring and stabilization plan and Tailings Disposal Area 4 radon barrier construction completion. The team determined that the technical reviews were complete, and the decisions related to these technical reviews were well-documented.

During the review period Washington issued four license variances. The four variances involved temporary changes to DMC EP-6 perimeter fence and security in 2021, suspension of environmental sampling due to the Ford Corkscrew fire incident in 2021, extension for variances from DMC's operating procedures in 2020, and modification to environmental monitoring program in 2020. The team determined that these variances were well-documented.

Technical Quality of Incident and Allegation Activities

Washington implemented its own procedures for incident and allegation responses and used incident and allegation logs for event tracking. Each incident or allegation included all correspondence between Washington and the licensee or concerned individual, memos prepared by Washington summarizing the response, and an incident or allegation checklist. The team determined that procedures were appropriate for handling incidents and allegations related to uranium recovery. There have been no changes to Washington's incidents and allegations procedures.

During the review period there were no reportable incidents reported to Washington. However, Washington received three non-reportable events in 2019, 2020, and 2021. The team reviewed these events and agreed that they were not reportable to the NRC.

Washington received no allegations during the review period related to uranium recovery. There were no allegations referred by the NRC.

c. Evaluation

The team determined that during the review period Washington did not meet all the performance indicator objectives. For example:

- Qualification criteria for new uranium recovery technical staff were established but were not compatible with IMC 1248 Appendices H and I.

The 2018 IMPEP team made the following recommendation:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the IMC 1248 appendices A, B, D, E, H, and I are adopted.

Since the 2022 IMPEP team identified that the self-study reading list and specialized training were not completed, the team recommended retaining the 2018 recommendation but modify it to read as follows:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the IMC 1248 appendices A, B, E, H, and I are adopted.

The team will recommend that Washington revise their training and qualification procedure (WMS 102) for uranium recovery inspectors and license reviewers to ensure completion of self-study reading lists and specialized training courses prior to being fully qualified and approved by management.

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

d. MRB Chair's Determination

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

5.0 SUMMARY

Washington's performance was found satisfactory for four performance indicators: Status of Materials Inspection Program, SS&D Evaluation Program, LLRW Disposal Program, and Uranium Recovery Program. Washington's performance was found to be satisfactory but needs improvement for the following three performance indicators: Technical Staffing and Training; Technical Quality of Inspections; and Legislation, Regulations, and Other Program Elements. Washington's performance was found to be unsatisfactory for the following two performance indicators: Technical Quality of Incident and Allegation Activities and Technical Quality of Licensing Actions.

The team recommended closing the technical review documentation recommendation from the 2018 IMPEP review for the LLRW indicator and modifying the 2018 IMPEP review training and qualification recommendation as follows:

- Washington should review, revise, and update the training and qualification requirements for all aspects of its Agreement State Program to ensure the essential objectives of the NRC's IMC 1248 appendices A, B, E, H, and I are adopted.

The team made 10 new recommendations, but the MRB Chair asked the team to combine some recommendations. Therefore, the team made and the MRB Chair agreed with the following 8 new recommendations:

1) Washington should revise their *Radioactive Material Section Standard Operating Procedure*, and train staff on the revised procedure.

2) Washington should perform an extent of condition review across all licensing categories by performing a smart sampling of licenses issued since May 4, 2018, to:

   (a) ensure that maximum possession limits are accurate and in accordance with applicable licensing guidance (e.g., applicable SS&D registration);
   (b) ensure that only the radioactive material requested by the licensee remains on the license (such as, remove additional gauge models placed on the license by Washington);
   (c) ensure that locations of use and storage are accurate;
   (d) ensure that license reviewers considered the licensee's inspection and enforcement history for license renewal reviews; and
   (e) revise the license templates to be consistent with NRC's licensing guidance.

3) Washington should revise their licensing procedure to be compatible with NRC's NUREG-1556 licensing guidance. The revised licensing procedure should also include a periodic assessment to review completed licensing actions.

4) Washington should revise their *Radioactive Material Section Standard Operating Procedure* to provide guidance for electronic transfers of sensitive security-related documents.

5) Washington should document the actions they took in response to the UW contamination incident in 2019. These include actions taken and basis for release at a personal residence, a restaurant and with a state vehicle. The written report should document the dose assessments (e.g., external dosimetry, urinalysis, and whole-body scans) of the two contaminated inspectors involved in the incident.

6) Washington should revise their allegation and incident procedures to include all necessary actions (e.g., require protection of alleger identity as allowed by law, ensure proper and complete documentation of the receipt and closure of incidents and allegations, ensure that follow-up inspections are scheduled and completed, ensure allegations are properly maintained with allegations and not mixed with incidents, and ensure that allegations are documented and easily retrievable).

7) Washington should locate all allegation records received during the review period and assess whether appropriate closure actions were taken, verify that the allegation files were complete, accurate, and documented in the tracking system.

8) Washington should perform a review of all license conditions, identify non-standard license conditions, and submit the non-standard license conditions to the NRC for a compatibility review.

Accordingly, the team recommended and the MRB Chair agreed that the Washington Agreement State Program be found adequate to protect public health and safety but needs improvement.

Since the team noted that Washington’s program has the potential to create gaps, conflicts, duplication, or other conditions that could jeopardize an orderly pattern in the collective national effort to regulate agreement materials, the team also recommended and the MRB Chair agreed that the Washington Agreement State Program be found not compatible with the NRC's program.

Based on the results of the current IMPEP review and program decline, the team recommended and the MRB Chair agreed that Washington be placed on a period of heightened oversight.

The team recommended and the MRB Chair agreed that in approximately 2 years, a follow-up IMPEP review be conducted for the less than satisfactory indicators and a periodic meeting be conducted for the satisfactory indicators. After the follow-up IMPEP review, the MRB Chair will determine when the next full IMPEP review will be conducted.

LIST OF APPENDICES

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	**Areas of Responsibility**
Kathy Modes, NMSS	Team Leader Inspector Accompaniments
Sherrie Flaherty, Minnesota	Team Leader in Training Status of Materials Inspection Program
Randy Erickson, Region IV	Technical Staffing and Training
Randolph Ragland, Region I	Technical Quality of Inspections Inspector Accompaniments
Latisha Hanson, Region IV	Technical Quality of Licensing Actions
Elizabeth Ullrich, Region I	Technical Quality of Incident and Allegation Activities
Joseph O'Hara, NMSS	Legislation, Regulations, and Other Program Elements
Stephen Poy, NMSS	SS&D Evaluation Program
Gehan Flanders, Region III	LLRW Disposal Program Inspector Accompaniments
Muhammadali Abbaszadeh, Texas	Uranium Recovery Program Inspector Accompaniment

APPENDIX B

INSPECTOR ACCOMPANIMENTS

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

Accompaniment No.: 1	License No.: RECP-196
License Type: *Service Provider – irradiator movement*	Priority: 2
Inspection Date: 9/27/2021	Inspector's initials: RM

Accompaniment No.: 2	License No.: MO225
License Type: *High Dose Rate (HDR) Afterloader & Nuclear Medicine*	Priority: 2
Inspection Date: 9/28/2021	Inspector's initials: JK

Accompaniment No.: 3	License No.: IR073
License Type: *Industrial Radiography without a temporary job site (TJS)*	Priority: 1
Inspection Date: 9/29/2021	Inspector's initials: SM

Accompaniment No.: 4	License No.: RECIP-196
License Type: *Service Provider – transportation only*	Priority: 2
Inspection Date: 9/30/2021	Inspector's initials: RM

Accompaniment No.: 5	License No.: GA-1434
License Type: *Service Provider – dry run for source loading*	Priority: 2
Observation Date: 10/1/2021	Inspector's initials: RM

Accompaniment No.: 6	License No.: GA-1434-1
License Type: *Service Provider – irradiator source loading*	Priority: 2
Inspection Date: 10/2/2021	Inspector's initials: TH

Accompaniment No.: 7	License No.: WN-IR078-1
License Type: *Industrial Radiography with a TJS*	Priority: 1
Inspection Date: 11/4/2021	Inspector's initials: MB

Accompaniment No.: 8	License No.: WN-MO135-1
License Type: Medical Broad Scope	Priority: 2
Inspection Date: 11/2/2021	Inspector's initials: JK

Accompaniment No.: 9	License No.: WN-MO306-1
License Type: *Gamma Knife*	Priority: 2
Inspection Date: 11/3/2021	Inspector's initials: RM

Waste Section

Low-Level Radioactive Waste

Accompaniment No.: 10	License No.: WN-I0393-1
License Type: *Radwaste Broker*	Priority: 2
Inspection Date: 10/19/2021	Inspector's initials: CR

Accompaniment No.: 11	License No.: WN-1019-2
License Type: *Low-Level Radioactive Waste Disposal Facility*	Priority: 1
Inspection Dates: 10/20-21/2021	Inspector's initials: CR

Uranium Recovery

Accompaniment No.: 12	License No.: WN-I043-2
License Type: *Uranium Mining*	Priority: 1
Inspection Date: 11/18/2021	Inspector's initials: BS