



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

December 29, 2022

Horacio A. Tablada, Secretary  
Maryland Department of the Environment  
1800 Washington Boulevard  
Baltimore, MD 21230

Dear Horacio Tablada:

On December 8, 2022, the Management Review Board (MRB), which consisted of the U.S. Nuclear Regulatory Commission (NRC) senior managers and an Agreement States Program manager, met to consider the results of the follow-up Integrated Materials Performance Evaluation Program (IMPEP) review of the Maryland Agreement State Program. The MRB Chair in consultation with the MRB found the Maryland Agreement State Program adequate to protect public health and safety and compatible with the NRC's program.

The enclosed final report documents the IMPEP team's findings and summarizes the results of the MRB meeting. Based on the results of the follow-up IMPEP review, the MRB directed that the next periodic meeting take place in approximately 18 months, and the next full IMPEP review to be conducted in approximately 3 years.

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

Sincerely,

A handwritten signature in blue ink that reads "Raymond Furstenau".

Furstenau, Raymond signing on behalf  
of Haney, Cathy  
on 12/29/22

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 Maryland Agreement  
State Program IMPEP Report

cc: Eva Nair  
Air and Radiation Program Manager  
Maryland Department of the Environment

SUBJECT: FINAL MARYLAND AGREEMENT STATE PROGRAM INTEGRATED MATERIALS  
PERFORMANCE EVALUATION PROGRAM REPORT  
DATE December 29, 2022

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM  
REVIEW OF THE MARYLAND AGREEMENT STATE PROGRAM

August 23-25, 2022

**FINAL IMPEP REPORT**

## EXECUTIVE SUMMARY

The results of the follow-up Integrated Materials Performance Evaluation Program (IMPEP) review of the Maryland Agreement State Program are discussed in this report. The follow-up IMPEP review was conducted from August 23-25, 2022. The follow-up IMPEP focused on the indicator Technical Quality of Licensing Actions.

Based on the results of the 2022 follow-up IMPEP review, the team recommended and the MRB Chair agreed that Maryland's performance be found satisfactory but needs improvement for the performance indicator: Technical Quality of Licensing Actions.

Based on the 2022 follow-up IMPEP review, the team recommended and the MRB Chair agreed that the 2021 recommendation regarding the review of the qualifications of all radiation safety officers, authorized users, and authorized medical physicists on Maryland's medical licenses should remain open. The team recommended and the MRB Chair agreed that the 2021 IMPEP review recommendation related to the protection of sensitive information should be closed. In addition, the team made one new recommendation and the MRB Chair agreed that Maryland:

- Update licensing procedures to ensure the reviewer conducts a thorough analysis of the licensee's inspection and enforcement history of renewal applications and that Maryland conduct training on the updated procedures.

Accordingly, the team recommended and the MRB Chair agreed that the Maryland Agreement State Program be found adequate to protect public health and safety and compatible with the NRC's program. The team recommended and the MRB Chair agreed that a periodic meeting take place in approximately 18 months with the next IMPEP review in approximately 3 years.

## 1.0 INTRODUCTION

The Maryland Agreement State Program follow-up Integrated Materials Performance Evaluation Program (IMPEP) review was conducted from August 23–25, 2022, by a team of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the State of Oklahoma. Team members are identified in Appendix A.

This review was conducted in accordance with the “Agreement State Program Policy Statement,” published in the *Federal Register* (FR) on October 18, 2017 ([82 FR 48535](#)), and NRC Management Directive (MD) 5.6, “Integrated Materials Performance Evaluation Program (IMPEP),” dated July 24, 2019. Preliminary results of the review, which covered the period of July 17, 2021, to August 25, 2022, were discussed with Maryland managers on the last day of the review.

In preparation for the follow-up review, a questionnaire addressing the common performance indicator Technical Quality of Licensing Actions was sent to Maryland on July 13, 2022. Maryland provided its response to the questionnaire on July 25, 2022. A copy of the questionnaire response is available in the NRC’s Agencywide Documents Access and Management System (ADAMS) Accession Number [ML22208A222](#).

The Maryland Agreement State Program is administered by the Radiological Health Program (RHP). The RHP is located within the Air and Radiation Administration of the Maryland Department of the Environment. Organization charts for Maryland are available in [ML21189A270](#).

The team issued a draft report to Maryland on October 5, 2022, for factual review and an opportunity to comment ([ML22266A264](#)). Maryland responded to the draft report by letter dated October 19, 2022, from Ms. Eva Nair, Air and Radiation Program Manager, Maryland Department of the Environment ([ML22294A054](#)). The Management Review Board (MRB) was convened on December 8, 2022, to discuss the team’s findings and recommendations.

At the time of the review, Maryland regulated 531 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 Maryland.

The team evaluated the information gathered against the established criteria for the common performance indicator focused on during this review and made a preliminary assessment of Maryland’s performance.

## 2.0 PREVIOUS IMPEP REVIEW AND STATUS OF RECOMMENDATIONS

The previous IMPEP review concluded on July 16, 2021. The final report is available in [ML21302A094](#). The results of the review and the status of the associated recommendations are as follows:

Technical Staffing and Training: Satisfactory  
Recommendation: None

Status: Satisfactory

Recommendation: None

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 1: Maryland review the qualifications of all radiation safety officers (RSOs), authorized users (AUs), and authorized medical physicists (AMPs), listed on their medical licenses to ensure that they meet the qualifications in accordance with Maryland's regulations for medical use of byproduct material.

Status: Based on the 2022 follow-up IMPEP review, the team determined that while Maryland had made significant progress in reviewing the qualifications of all RSOs, AUs, and AMPs, this recommendation should remain open.

Recommendation 2: Maryland develop and implement a procedure to ensure protection of sensitive information as it applies to written correspondence with licensees.

Status: Based on the 2022 follow-up IMPEP review, the team determined that Maryland developed and implemented a procedure for the protection of sensitive information and that the recommendation should be closed.

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

Legislation, Regulation, and Other Program Elements: Satisfactory  
Recommendation: None

Sealed Source and Device Evaluation Program: Satisfactory  
Recommendation: None

Overall finding: Adequate to protect public health and compatible with the NRC's program.

### 3.0 COMMON PERFORMANCE INDICATORS

As mentioned in this report, this is a follow-up review which focused on the indicator, Technical Quality of Licensing Actions.

#### 3.1 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 Maryland licensing staff and regulated community is a significant indicator of the overall quality of the licensing program.

a. Scope

The team used the guidance in State Agreements procedure SA-104, "Reviewing the Common Performance Indicator: Technical Quality of Licensing Actions," and evaluated Maryland'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 Regulation* (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material," 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 follow-up review period, Maryland performed 357 radioactive materials licensing actions. The team evaluated 9 of those licensing actions: 1 new application, 4 amendments, 2 renewals, and 2 terminations. The team evaluated casework which included the following license types and actions: medical diagnostic and therapeutic, industrial radiography, panoramic and self-shielded irradiators, service providers, financial assurance, and notifications. The casework sample represented work from six former and current license reviewers. Since the previous IMPEP review, two license reviewers left the program. One of Maryland's contracted employees (a category of employee with full staff qualification but different benefits) joined the program as a permanent employee to fill the vacancy, and Maryland intends to hire another contracted employee to replace the person who joined the program.

As a result of the 2021 IMPEP review, the IMPEP team recommended and the Management Review Board (MRB) Chair agreed, that Maryland review the qualifications of all RSOs, AUs, and AMPs listed on their medical licenses to ensure that they meet the qualifications in accordance with Maryland's regulations for medical use of byproduct material.

Maryland conducted a thorough review of the qualifications of RSOs, AUs, and AMPs on Maryland medical licenses. During the follow-up IMPEP review, the team found that Maryland had reviewed 168 RSO, 830 AU, and 125 AMP qualifications on 154 active licenses, and had removed all errors using requests for additional information. Maryland

has approximately 100 licenses remaining to be reviewed. The team determined that Maryland's license reviewers had a thorough understanding of the RSOs, AUs, and AMPs qualifications listed on their medical licenses, and the need to ensure that they meet the qualifications in accordance with Maryland's regulations for medical use of byproduct material. Maryland reviewed all medical incidents associated with these licensees and determined that there were no misadministrations attributed to any of the RSOs, AUs and AMPs. Therefore, based on their review, Maryland did not identify any events or health and safety issues attributed to any users being improperly placed on Maryland medical licenses. The team determined that Maryland had made significant progress on the review of RSOs, AUs, and AMPs. However, the 2022 IMPEP team recommends that this recommendation stay open until Maryland's qualifications review is complete.

Following the 2021 IMPEP review, Maryland implemented a procedure to ensure the protection of sensitive information. A thorough review of licensing actions since the 2021 IMPEP showed proper marking on correspondence with licensees. The team recommends that this recommendation from the 2021 IMPEP review be closed.

For renewals issued during the follow-up IMPEP review period, the team found that renewal applications did not demonstrate a thorough analysis of a licensee's inspection and enforcement history. The team conducted interviews with the Maryland staff and found that reviews of the licensing procedures and checklists were not always thorough. The team did not observe in its sample of renewals that any health and safety issues resulted from the incomplete analysis of licensee's inspection and enforcement history. Maryland understands the importance of the issue and has revised its procedures and checklists.

c. Evaluation

The team determined that during the review period Maryland met the performance indicator objectives listed in Section 3.4.a, except for:

- Reviews of renewal applications did not demonstrate a thorough analysis of a licensee's inspection and enforcement history.

Because Maryland's program did not demonstrate a thorough analysis of licensee's inspection and enforcement history, the team made one new recommendation that Maryland:

- Update licensing procedures to ensure the reviewer conducts a thorough analysis of the licensee's inspection and enforcement history of renewal applications and that Maryland conduct training on the updated procedures.

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

d. MRB Chair's Determination

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



#### 4.0 SUMMARY

Based on the results of the 2022 follow-up IMPEP review, the team recommended and the MRB Chair agreed that Maryland's performance be found to be satisfactory, but needs improvement, for the performance indicator Technical Quality of Licensing Actions.

The 2022 follow-up IMPEP review team recommended and the MRB Chair agreed that the 2021 recommendation regarding the review of the qualifications of all RSOs, AUs, and AMPs on Maryland's medical licenses should remain open. The team also recommended and the MRB Chair agreed that the 2021 IMPEP review recommendation related to the protection of sensitive information should be closed. In addition, the team recommended and the MRB Chair agreed on one new recommendation that Maryland:

- Update licensing procedures to ensure the reviewer conducts a thorough analysis of the licensee's inspection and enforcement history of renewal applications and that Maryland conduct training on the updated procedures.

Accordingly, the team recommended and the MRB agreed that Maryland be found adequate to protect public health and safety, and compatible with the NRC's program. Based on the results of the 2022 IMPEP review, the team recommended and the MRB Chair agreed that the next full IMPEP review take place in approximately 3 years, with a periodic meeting in approximately 18 months.

## LIST OF APPENDICES

Appendix A      IMPEP Review Team Members

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Areas of Responsibility</b>
Stephen Poy, NMSS	Team Leader Technical Quality of Licensing Actions
Keisha Cornelius, Oklahoma	Technical Quality of Licensing Actions
Farrah Gaskins, Region I	Periodic Meeting

12/29/2022 Letter to H. Tablada re Maryland Final IMPEP Report DATE December 29, 2022

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NAME	CHaney RFurstenau for <i>RF</i>			
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