



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

January 7, 2021

Parham Jaber, M.D., MMPH  
Chief Deputy Commissioner –  
Public Health and Preparedness  
Virginia Department of Health  
James Madison Building  
109 Governor Street, 13<sup>th</sup> Floor  
Richmond, VA 23219

Dear Dr. Jaber:

On December 16, 2020, the Management Review Board (MRB), which consisted of U.S. Nuclear Regulatory Commission (NRC) senior managers and an Organization of Agreement States MRB member, met to consider the results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Virginia Agreement State Program. The MRB found the Virginia 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 (Section 5.0). Based on the results of the current IMPEP review, the next full review of the Virginia Agreement State Program will take place in approximately 5 years, with a periodic meeting in approximately 2.5 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 "Darrell J. Roberts".

Signed by Roberts, Darrell  
on 01/07/21

Darrell J. Roberts  
Deputy Executive Director for Materials, Waste,  
Research, State, Tribal, Compliance, Administration,  
and Human Capital Programs  
Office of the Executive Director for Operations

Enclosure:  
Virginia Final IMPEP Report

cc: Steven A. Harrison, M.A., MEP  
Director, Office of Radiological Health  
Virginia Department of Health

Asfaw Fenta, M.S.  
Director, Radioactive Materials Program  
Virginia Department of Health

SUBJECT: FINAL VIRGINIA FY 2020 INTEGRATED MATERIALS PERFORMANCE  
EVALUATION PROGRAM REVIEW DATE January 7, 2021

**DISTRIBUTION:**

Chairman Svinicki	RLewis, NMSS	DWhite, NMSS
Commissioner Baran	TClark, NMSS	RidsOgcMailCenter Resource
Commissioner Caputo	BWelling, RI	RidsSecyMailCenter Resource
Commissioner Wright	JNick, RI	RidsEdoMailCenter Resource
Commissioner Hanson	MFord, RI	RidsNmssOd Resource
MSpencer, OGC	MReichard, RI	RidsRgn1MailCenter Resource
JLubinski, NMSS	DPiccirillo, RIII	RidsRgn4MailCenter Resource
JMonninger, RIV	JAlbright, North Carolina	OAS Board
DScalise, New Hampshire	LRoldan-Otero, NMSS	

**ADAMS Accession No.: ML20353A138**

**\*concurred via email**

OFFICE	NMSS/TL*	NMSS/MSST:PM*	NMSS/MSST/RRS*	NMSS/MSST:BC*
NAME	JCook	RJohnson	ERaphael	BAnderson
DATE	12/17/2020	12/17/2020	12/18/2020	12/18/2020
OFFICE	NMSS/MSST:DD*	NMSS/TechEd*	NMSS/OD*	OEDO/DEDCM*
NAME	KWilliams	WMoore	JLubinski (RLewis for)	DRoberts
DATE	12/22/2020	12/22/2020	12/23/2020	01/ 7 /2021

**OFFICIAL RECORD COPY**



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

SEPTEMBER 21-25, 2020

**FINAL REPORT**

## **EXECUTIVE SUMMARY**

The results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Virginia Agreement State Program (Virginia) are discussed in this report. The review was conducted remotely from September 21-25, 2020, with in-person inspector accompaniments performed August 25-27, 2020.

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

Accordingly, the team recommended, and the Management Review Board (MRB) agreed that Virginia be found adequate to protect public health and safety and compatible with the U.S. Nuclear Regulatory Commission's program. Since this is the third consecutive IMPEP review with all performance indicators being found satisfactory, the team also recommended, and the MRB agreed that the next IMPEP review take place in approximately 5 years with a periodic meeting in approximately 2.5 years.

## 1.0 INTRODUCTION

The Virginia Agreement State Program (Virginia) review was conducted from September 21-25, 2020, by a team of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the State of North Carolina. This review was conducted remotely due to travel restrictions imposed by the COVID-19 Public Health Emergency (PHE), with in-person inspector accompaniments performed August 25-27, 2020. Team members are identified in Appendix A. The review was conducted in accordance with the "Agreement State Program Policy Statement," published in the *Federal Register* (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 November 8, 2014, to September 25, 2020, were discussed with Virginia 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 Virginia on February 6, 2020. Virginia provided its response to the questionnaire on September 8, 2020. A copy of the questionnaire response is available in the Agencywide Documents Access and Management System (ADAMS) Accession Number [ML20260H282](#).

The Program is administered by the Radioactive Materials Program in the Office of Radiological Health. Organization charts for Virginia are available in ADAMS Accession Number [ML20260H271](#).

A draft of this report was issued to Virginia on November 4, 2020, for factual review and opportunity to comment (ADAMS Accession Number [ML20300A472](#)). Virginia responded to the draft report by letter dated November 6, 2020, from Steven Harrison, Director, Office of Radiological Health, Virginia Department of Health (ADAMS Accession Number [ML20322A416](#)). The Management Review Board (MRB) was convened on December 16, 2020, to discuss the team's findings and recommendations. This meeting was conducted remotely due to travel restrictions imposed by the COVID-19 PHE.

At the time of the review, Virginia regulated 377 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 Commonwealth of Virginia.

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

## 2.0 PREVIOUS IMPEP REVIEW AND STATUS OF RECOMMENDATIONS

The previous IMPEP review concluded on November 7, 2014. The final report is available in ADAMS (Accession Number [ML15021A074](#)). The results of the review are as follows:

Technical Staffing and Training: Satisfactory  
Recommendation: None

Status of Materials Inspection Program: Satisfactory  
Recommendation: None

Technical Quality of Inspections: Satisfactory

Recommendation: None

Technical Quality of Licensing Actions: Satisfactory  
Recommendation: None

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

Compatibility Requirements (now Legislation, Regulations, and Other Program Elements): Satisfactory  
Recommendation: None

Overall finding: 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 enough experienced, knowledgeable, and 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 Virginia'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 Inspection Manual Chapter (IMC) 1248, "Formal Qualifications Program for Federal and State Material and Environmental Management Programs."
- Qualification criteria for new technical staff are established and are followed, or qualification criteria will be established if new staff members are hired.
- 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

Virginia is comprised of six full-time equivalent personnel, including one supervisor and five technical staff members who are qualified as both inspectors and license reviewers. During the review period, two technical staff and two supervisors left the program. One technical staff member retired, and the second staff member resigned and accepted another job offer. A supervisor that resigned in 2016 to accept another job was replaced in 2018. The reason for the hiring delay was a lack of qualified candidates for the position.

The supervisor hired in 2018 subsequently retired in September 2019 and was replaced in October 2019. At the time of the IMPEP team's review, there were two inspector/license reviewer vacancies. Virginia management stated that two individuals had been hired and that their anticipated start date is October 10, 2020. The two vacant positions stated above were vacant for 2 and 10 months, respectively.

Virginia has a training and qualification program compatible with the NRC's IMC 1248. Virginia management is very supportive of the training program, and the staff is encouraged to attend NRC training courses. Continuing education and professional development are promoted and tracked by the supervisor. The training qualification records that are used to track qualification milestones are comprehensive and include self-study, in-house training, on-the-job training, and formal coursework. A peer review program has been implemented where the supervisor or qualified inspectors and license reviewers provide on-the-job training for new staff qualifying in either discipline. The fully qualified staff also received supervisor support and met the 24-hour refresher training every 24 months, as detailed in IMC 1248.

c. Evaluation

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

d. MRB Chair's Determination

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

3.2 Status of Materials Inspection Program

Periodic inspections of licensed operations are essential to ensure that activities are being conducted in compliance with regulatory requirements and consistent with good safety 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 State Agreements procedure SA-101, "Reviewing the Common Performance Indicator: Status of the Materials Inspection Program," and evaluated Virginia's performance with respect to the following performance indicator objectives:

- Initial inspections and inspections of Priority 1, 2, and 3 licensees are performed at the frequency prescribed in IMC 2800.
- 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

Virginia's inspection frequencies are the same as or more frequent for similar license types in IMC 2800. Virginia performed 327 Priority 1, 2, 3, and initial inspections during the review period. Of those, three Priority 1, 2, and 3 inspections were performed overdue, 13 initial inspections were performed overdue, and one initial inspection was overdue at the time of the IMPEP review. The team noted that NRC Temporary Instruction 003, "Evaluating the Impacts of the COVID-19 PHE as part of the Integrated Materials Performance Evaluation Program (IMPEP)," states, in part, that for inspections that exceed the scheduling window as described in IMC 2800 with overdue dates falling inside the defined timeframe of the COVID-19 PHE, the number of overdue inspections should be noted in the report but should not be counted in the calculation of overdue inspections described in State Agreements procedure SA-101, "Reviewing the Common Performance Indicator: Status of Materials Inspection Program," Appendix A, provided that the Program continues to maintain health, safety, and security. Of the overdue inspections noted above, one initial inspection was performed overdue and one initial inspection was overdue at the time of the IMPEP review due to impacts related to the COVID-19 PHE. Therefore, the team did not include these two inspections when performing the calculation. The team determined that Virginia conducted 4.4 percent of Priority 1, 2, 3, and initial inspections overdue during the review period. During the MRB meeting, Virginia's management stated that the initial inspection overdue at the time of the IMPEP review had been completed.

The team reviewed the timeliness of the issuance of inspection reports to licensees and found that 24 of the 327 inspections had letters communicating the results of the inspection that were issued to the licensee beyond Virginia's goal of 30 days after the inspection exit. In most cases, the letters were issued anywhere from two days to six months after the 30-day goal. In one instance, the letter was issued two years after the inspection occurred. Virginia attributed this delay to an inspector not submitting the report in accordance with their procedures. Virginia stated that, although the inspection results were not formally communicated within 30 days, there were no violations associated with this inspection.

The team reviewed Virginia's inspection of candidate licensees working under reciprocity. The team determined that Virginia inspected at least 20 percent of the candidate licensees working under reciprocity in 4-out-of-5 calendar years covered by the review period. The lone exception was calendar year 2018, where Virginia inspected 3 of the 17 candidate licensees, for a total of 17.6 percent.

c. Evaluation

The team determined that, during the review period, Virginia met the performance indicator objectives listed in Section 3.2.a, except for:

- Candidate licensees working under reciprocity were not inspected in accordance with the criteria prescribed in IMC 2800, and other applicable guidance or compatible Agreement State Procedure in calendar year 2018, and
- Letters communicating inspection results for 24 inspections were not communicated to licensees in a timely manner.

The team determined that Virginia met and exceeded the 20 percent inspection criteria for reciprocity for four of the five years covered by the review period. For calendar year 2018, completion of only one additional inspection would have satisfied the criteria. The team also noted that Virginia implemented a revised reciprocity procedure in February 2020 in accordance with IMC 2800 which eliminates the 20-percent inspection criteria. IMC 2800 states that a program can establish its own goals so long as the objectives stated in Section 07.04 are met. The team reviewed this procedure and determined that the new approach allows for reciprocity inspections to be performed in a performance based, risk-informed manner and considers all reciprocity applicants eligible for inspection and therefore found the procedure to be acceptable.

The team determined that, in approximately 7 percent of the inspections it performed, Virginia communicated the results more than 30 days after the inspection exit meeting. Reasons for the delayed transmittals varied and no root cause was identified. The team verified during the in-person inspection accompaniments that inspectors communicated the potential for any findings to the licensee before concluding the inspection and confirmed the licensee's understanding. As a result of findings being communicated during the inspection exit, corrective actions by licensees were implemented timely and not held up as a result of the delayed inspection finding transmittals. Therefore, the team determined this finding to be of low significance to Virginia's overall performance for this indicator.

Based on the criteria in MD 5.6, the team recommends that Virginia'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 Virginia'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 Virginia'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 evaluated the inspection reports, enforcement documentation, and interviewed inspectors involved in materials inspections conducted during the review period. The inspections reviewed included a cross-section of the inspections conducted by all six of Virginia's past and present inspectors and supervisors. Virginia's supervisors also conduct routine inspections. This evaluation covered medical, industrial, commercial, academic, research, and service licenses. A total of 42 inspection records were reviewed, including: 29 routine inspections, 5 initial inspections, 8 reciprocity inspections. One of the initial inspection records was the first inspection of a new reciprocity licensee.

A team member conducted three in-person inspector accompaniments on August 25-27, 2020. No performance issues were noted during the accompaniments. The team found that inspectors were well-prepared and thorough, and assessed the impact of licensed activities on health, safety, and security. Inspectors observed the use of radioactive materials when possible and interviewed licensee staff. Inspectors used open-ended questions and were able to develop a basis of confidence that radioactive materials were being used safely and securely. Any findings observed were brought to the user's attention at the time of the inspection and again to the licensee's management during the inspection closeout. Inspection reports and compliance letters to the licensees for those reports reviewed by the team were completed within 30 days. The inspector accompaniments are identified in Appendix B.

With one exception, supervisory accompaniments were performed annually for all qualified inspectors for each year of the review period. In 2015, one qualified inspector

was not accompanied. Because the inspector and supervisor from that time period are no longer employed by Virginia, the team could not ascertain why this accompaniment was not performed.

Inspection documentation indicates that inspections are conducted with enough detail and depth to evaluate licensee performance in meeting regulatory requirements and license commitments. Inspection reports reviewed were thorough and they documented observations made by inspectors during inspections. Virginia's inspection procedures are followed as shown by documentation examined during this review. Health, safety, and security are addressed, as appropriate. Citations issued to licensees due to violations of the Virginia's radioactive materials regulations, or for failing to perform activities as specified by license condition, were well supported in the inspection reports. Inspection documentation was complete, and when required, was marked to discourage public disclosure. In all cases, enforcement documentation was complete and indicates that the agency sufficiently evaluates licensee corrective actions.

The team determined that Virginia has a sufficient supply of radiation survey instruments, such as Geiger-Muller devices, scintillation detectors, ion chambers, and micro-R meters to support the inspection program. Survey instruments are calibrated by a commercial vendor. Coordination of the survey instrument calibration program is conducted through the Virginia Department of Health, Office of Radiological Health's Environmental Monitoring and Emergency Preparedness Program, and records indicate that all survey instrumentation is calibrated on an annual basis.

c. Evaluation

The team determined that during the review period Virginia met the performance indicator objectives listed in Section 3.3.a, except for:

- Supervisors, or senior staff as appropriate, conduct annual accompaniments of each inspector to assess performance and assure consistent application of inspection policies.

Because the inspector and supervisor from that time period are no longer employed by Virginia, the team could not ascertain why this accompaniment was not performed.

Based on the criteria in MD 5.6, the team recommends that Virginia's performance with respect to the indicator, Technical Quality of Inspections, be found satisfactory.

d. MRB Chair's Determination

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

3.4 Technical Quality of Licensing Actions

The quality, thoroughness, and timeliness of licensing actions can have a direct bearing on public health and safety, as well as security. An assessment of licensing procedures, implementation of those procedures, and documentation of communications and associated actions between Virginia's 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 Virginia'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 of the *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 (Part 37 equivalent).
- Documents containing sensitive security information are properly marked, handled, controlled, and secured.

b. Discussion

During the review period, Virginia performed 3,354 radioactive materials licensing actions. The team evaluated 29 of those licensing actions. The licensing actions selected for review included 9 new applications, 5 amendments, 10 renewals, 3 terminations, 3 financial assurance actions (2 of which were performed concurrently with renewals) and 1 bankruptcy action. The team evaluated casework which included the following license types and actions: broad scope, medical diagnostic and therapy, radionuclide production using an accelerator, commercial manufacturing and distribution, industrial radiography, research and development, academic, nuclear pharmacy, gauges, panoramic and self-shielded irradiators, well-logging, and service providers. The casework sample represented work from seven current and former license reviewers.

The team noted that Virginia requires license renewals to be submitted every 5 years. The team reviewed Virginia's license templates, procedures, and the Radioactive Materials Virginia licensing guides. The Virginia licensing guides provide clear guidance for various licensing action types including news, renewals, terminations, and change of control actions. Licensing actions were reviewed by a secondary reviewer, which was performed either by a supervisor or another license reviewer qualified to perform that type of review. Timeliness goals are established to ensure responsiveness to the licensee or applicant but allow for the licensee or applicant to have adequate time to respond to requests for information, particularly when the requests are complex.

The team evaluated the implementation of the Pre-Licensing Guidance and Risk Significant Radioactive Materials (RSRM) checklists. Virginia conducted pre-licensing visits for unknown entities and physical protection programs. For applications with RSRM, Virginia completed the RSRM checklist, as appropriate.

c. Evaluation

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

d. MRB Chair's Determination

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

3.5 Technical Quality of Incident and Allegation Activities

The quality, thoroughness, and timeliness of response to incidents and allegations of safety concerns can have a direct bearing on public health, 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 State Agreements procedure SA-105, "Reviewing the Common Performance Indicator: Technical Quality of Incident and Allegation Activities," and evaluated Virginia'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 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, 34 incidents were reported to Virginia. The team evaluated 14 radioactive materials incidents: 5 lost/stolen radioactive materials, 1 potential overexposure, 3 medical events, 4 involving damaged equipment, and 1 loss of control. The team determined that Virginia performed reactive inspections when appropriate and did a follow-up on each event in accordance with its procedure. Each incident was promptly evaluated, once Virginia was notified, for the following: potential impact on public health and safety, and to the environment; whether or not interviews of individuals involved in the incident were conducted; and that all findings were documented in a clear and concise manner.

The team evaluated Virginia's reporting of events to the NRC's Headquarters Operations Center as well as to NMED. The team determined that one of the 34 events was not reported in the correct manner or the correct time frame. The event involved a radiography camera with a source that was unable to be retracted to its fully shielded position. Virginia identified and reported the event as stated in SA-300 for events falling under its equivalent regulation to NRC regulation 10 CFR 34.101(a). This regulation requires a written report be submitted within 30 days of the event. Virginia did not recognize that the requirements in SA-300 for events falling under its equivalent to NRC regulation 10 CFR 30.50(b)(2) also applied to this event. Per SA-300, events falling under a State's equivalent to §30.50(b)(2) should be reported within 24 hours to the NRC's Operations Center. The team discussed the additional reporting requirements with Virginia management who immediately reported the event to the NRC's Operation's Center for completeness.

During the review period, nine allegations were received by Virginia. The team evaluated six of the nine allegations, including four allegations that the NRC had earlier referred to Virginia, during the review period. The team found that Virginia took prompt and appropriate action in response to the concerns raised. Documentation for each allegation reviewed was complete, concise and thorough. Concerned individuals were notified of the results of the investigation whenever possible.

#### c. Evaluation

The team determined that, during the review period, Virginia met the performance indicator objectives listed in Section 3.5.a, except for:

- Notifications are made to the NRC Headquarters Operations Center for incidents requiring a 24-hour or immediate notification to the Agreement State or NRC.

The team identified that of the 34 incidents received, Virginia reported one incident late and in an incorrect manner. The incident was reported directly to NMED within 30 days of receipt; however, it should have been reported to the NRC's Headquarters Operations Center within 24 hours of receipt. Once Virginia was aware of the criteria, it immediately reported the incident to the Headquarters Operations Center for completeness.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommends that Virginia's performance with respect to the indicator, Technical Quality of Incident and Allegation Activities, be found satisfactory.

#### d. MRB Chair's Determination

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

### 4.0 NON-COMMON PERFORMANCE INDICATORS

Four non-common performance indicators are used to review Agreement State programs: (1) Legislation, Regulations, and Other Program Elements; (2) Sealed Source and Device (SS&D) Evaluation Program; (3) Low-Level Radioactive Waste (LLRW) Disposal Program; and (4) Uranium Recovery (UR) Program. The NRC retains regulatory authority for SS&D Evaluation, LLRW Disposal, and UR Programs; therefore, only the first non-common performance indicator applied to this review.

#### 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 NMSS website/Regulation Toolbox at <https://scp.nrc.gov/regtoolbox.html>.

a. Scope

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

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

b. Discussion

Virginia became an Agreement State on March 31, 2009. The Virginia Agreement State Program's current effective statutory authority is contained in the Code of Virginia 32.1-228.1 and 32.1-235. The Department of Health is designated as the Commonwealth's radiation control agency. There have been no changes in legislation affecting the radiation control program during the review period.

Virginia's administrative rulemaking process takes approximately 5 to 19 months from drafting to finalizing a rule. The public, NRC, other agencies, and potentially impacted licensees and registrants are offered an opportunity to comment during the process. Comments are considered and incorporated, as appropriate, before the regulations are finalized and approved by the Commissioner of Health. The team noted that the Commonwealth's rules and regulations are not subject to "sunset" laws.

During the review period, Virginia submitted 13 proposed regulation amendments and 13 final regulation amendments. Seven of the amendments were overdue for State adoption at the time they were finalized.

The team determined that these seven overdue regulations were due for adoption early in the review period and did not affect Virginia's ability to regulate radioactive material and to ensure safety and security. In addition, it took 8 months and 3 days for the Commonwealth's Office of the Attorney General to review and endorse some of Virginia's regulation changes. Virginia had submitted their request for this review on October 29, 2015, and it wasn't completed until July 1, 2016. As a result, some regulations were overdue between 10 days and 19 months. At the time of the IMPEP review, however, no regulation amendments were overdue for adoption. All other program elements required for compatibility were adopted within 6 months of NRC designation. In August 2020, Virginia submitted to the NRC seven proposed amendments to regulations, which will be evaluated in the next IMPEP review.

c. Evaluation

The team determined that during the review period Virginia met the performance indicator objectives listed in Section 4.1.a, except for:

- Seven regulations were adopted in a time frame greater than 3 years after the effective date of the regulation.

During the review period, Virginia submitted 13 proposed regulation amendments to the NRC for a compatibility review. Seven of these amendments were adopted in a time frame greater than 3 years after the effective date of the regulation. However, these seven amendments were adopted early in the IMPEP review period and did not affect Virginia's ability to regulate radioactive material in a safe and secure manner. The overdue adoptions were late, in part, because it took 8 months and 3 days for the Commonwealth's Office of the Attorney General to review and endorse some of Virginia's regulation changes. There were no amendments overdue for adoption at the time of the review. The remaining six amendments were submitted timely and were all adopted and enforceable within the required 3-year timeframe for adoption.

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

d. MRB Chair's Determination

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

5.0 SUMMARY

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

Accordingly, the team recommended, and the MRB Chair agreed, that Virginia's program be found adequate to protect public health and safety, and compatible with the NRC's program. Since this was the third consecutive IMPEP review with all performance indicators being found satisfactory, the team recommended, and the MRB Chair agreed, that the next IMPEP review take place in approximately 5 years with a periodic meeting in approximately 2.5 years.

## LIST OF APPENDICES

Appendix A IMPEP Review Team Members

Appendix B Inspection Accompaniments

## APPENDIX A

### IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Areas of Responsibility</b>
Jacqueline Cook, Region IV	Team Leader Legislation, Regulations, and Other Program Elements
James Albright, North Carolina	Technical Quality of Inspections
Monica Ford, Region I	Inspector Accompaniments Status of Materials Inspection Program Status of Incidents and Allegation Activities
Darren Piccirillo, Region III	Technical Staffing and Training
Michael Reichard, Region I	Technical Quality of Licensing Actions

## APPENDIX B

### INSPECTION ACCOMPANIMENTS

The following inspection accompaniments were performed prior to the remote IMPEP review:

Accompaniment No.: 1	License No.: 153-425-1
License Type: Industrial Radiography	Priority: 1
Inspection Date: 08/25/20	Inspector: AS

Accompaniment No.: 2	License No.: 041-327-1
License Type: Industrial Radiography	Priority: 1
Inspection Date: 08/26/20	Inspectors: AF

Accompaniment No.: 3	License No.: 087-034-1
License Type: Nuclear Pharmacy	Priority: 2
Inspection Date: 08/27/20	Inspectors: SN