



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

April 15, 2019

MEMORANDUM TO: Chairman Svinicki
Commissioner Baran
Commissioner Burns
Commissioner Caputo
Commissioner Wright

FROM: John W. Lubinski, Director */RA/*
Office of Nuclear Material Safety
and Safeguards

SUBJECT: ANNUAL REPORT ON AGREEMENT STATES' AND U.S. NUCLEAR
REGULATORY COMMISSION'S RADIOACTIVE MATERIALS
PROGRAMS FOR CALENDAR YEAR 2018

Enclosed is the annual report to inform the Commission of the status of the Agreement States' and U.S. Nuclear Regulatory Commission's radioactive materials programs, as required by the June 30, 1997, Staff Requirements Memorandum on SECY-97-054, "Final Recommendations on Policy Statement and Implementing Procedures for: 'Statement of Principles and Policy for the Agreement State Program' and 'Policy Statement on Adequacy and Compatibility of Agreement State Programs.'"

Enclosure:
Annual Report on Agreement States' and
U.S. Nuclear Regulatory Commission's
Radioactive Materials Programs for
Calendar Year 2018

cc: SECY
OGC
OCA
OPA
CFO
EDO

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SUBJECT: ANNUAL REPORT ON AGREEMENT STATES' AND U. S. NUCLEAR
 REGULATORY COMMISSION'S RADIOACTIVE MATERIALS PROGRAMS
 FOR CALENDAR DATED APRIL 15, 2019

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**ANNUAL REPORT ON AGREEMENT STATES' AND U.S. NUCLEAR REGULATORY
COMMISSION'S RADIOACTIVE MATERIALS PROGRAMS FOR CALENDAR YEAR 2018**

EXECUTIVE SUMMARY

This report summarizes the performance of the Agreement State and U.S. Nuclear Regulatory Commission (NRC) radioactive materials programs including: (1) their ability to adequately protect public health and safety, and (2) whether Agreement State programs are compatible with the NRC's regulatory program. The NRC verifies the performance of these programs through the Integrated Materials Performance Evaluation Program (IMPEP).

Overall, the Agreement State and NRC programs continue to adequately protect public health and safety. Agreement State and NRC program performance, as measured by the IMPEP, has been consistently strong. During calendar year (CY) 2018, 33 of the 37 Agreement State programs had an adequacy finding of adequate to protect public health and safety. The remaining four States: Arkansas, Kansas, Mississippi, and Rhode Island, had adequacy findings of adequate to protect public health and safety, but needs improvement. Regarding compatibility, 35 of the 37 Agreement State programs had a compatibility finding of compatible with the NRC's regulatory program. The remaining two Agreement States, Kentucky and New York, had compatibility findings of not compatible with the NRC's regulatory program. All programs that have findings of adequate to protect public health and safety, but needs improvement or not compatible with the NRC's regulatory program are taking actions to address the issues and the NRC staff is monitoring their progress. All NRC programs have been determined to be adequate to protect public health and safety.

The NRC staff's trending analysis of the CY 2018 IMPEP results indicates that the National Materials Program is performing positively and consistent with previous years. Agreement States continue to play a valuable role in the IMPEP, as evidenced by an increase in Agreement State participation in program activities. The NRC staff will continue to monitor performance through the IMPEP and work with the Agreement State and NRC programs to address any performance issues or trends.

BACKGROUND

Section 274 of the Atomic Energy Act of 1954, as amended (AEA), provides broad authority for the U.S. Nuclear Regulatory Commission (NRC) to establish a unique Federal and State relationship in the administration of regulatory programs for the protection of public health and safety in the industrial, medical, commercial, and research uses of agreement material (source, byproduct, and small quantities of special nuclear material as identified by Section 274b. of the Atomic Energy Act, as amended). Subsection 274b. of the AEA authorizes the NRC to enter into an agreement by which the NRC discontinues and the State assumes regulatory authority over some or all of these materials. In order to discontinue its authority, the NRC must find that the State program is adequate to protect public health and safety and compatible with the NRC program for the regulation of agreement material. The NRC also has an obligation, pursuant to Subsection 274j. of the AEA, to periodically review existing Agreement State programs to ensure continued adequacy and compatibility.

PERFORMANCE MONITORING

The NRC uses the Integrated Materials Performance Evaluation Program (IMPEP) to periodically review the Agreement State and NRC programs to verify that these programs are adequate to protect public health and safety, and to verify that Agreement State programs are compatible with the areas of the NRC's regulatory program that require compatibility.

The frequency of IMPEP reviews range from 1 to 5 years, based on the program's performance. All reviews are conducted in accordance with NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)," and are conducted by teams of NRC and Agreement State staff members. The NRC staff also conducts periodic meetings between the IMPEP reviews to remain knowledgeable of the status of Agreement State and NRC Programs. A Management Review Board (MRB), composed of senior NRC managers and an Organization of Agreement States Liaison, makes the final NRC finding and issues the results.

Agreement State and NRC programs are determined to be adequate to protect public health and safety if the administration of these programs provides reasonable assurance of the protection of public health and safety in regulating the use of radioactive material. Adequacy findings under IMPEP result in one of three conclusions: (1) adequate to protect public health and safety; (2) adequate to protect public health and safety, but needs improvement; or (3) inadequate to protect public health and safety.

When the NRC promulgates regulations, it determines the degree to which Agreement States must be compatible with the NRC's regulations. Agreement State programs are determined to be compatible with the NRC's regulatory program when Agreement State programs align with this determination, and therefore do not create conflicts, duplications, gaps, or other conditions that jeopardize an orderly pattern in the regulation of agreement material. The IMPEP review compatibility findings for Agreement State programs are either compatible or not compatible.

The NRC, through the IMPEP and MRB, considers taking a graded approach to addressing programmatic weaknesses in Agreement State programs. Program improvement measures may include: monitoring, heightened oversight, probation, or suspension. Under these processes, the NRC staff works collaboratively with the Agreement States to ensure that they have a full understanding of the issues that need to be addressed, and that appropriate corrective actions are implemented in order to progress toward re-establishing fully satisfactory program performance.

Overall, the Agreement State and NRC programs continue to adequately protect public health and safety. Attachment 1 provides a “Summary of Agreement State Programs’ Adequacy and Compatibility.” Attachment 2 provides a “Summary of NRC Programs’ Adequacy.” The NRC programs have consistently been found to be adequate protect public health and safety. The remainder of this report discusses Agreement State program performance for programs that were on heightened oversight or monitoring during calendar year (CY) 2018 and trending analysis.

AGREEMENT STATE PROGRAM PERFORMANCE

A summary of recent activities related to Agreement State programs on heightened oversight or monitoring is presented in Attachment 3, “Heightened Oversight and Monitoring Status Chart.”

Agreement State Programs On Heightened Oversight

During CY 2018, the Kansas Agreement State Program was the only program on heightened oversight.

The Kansas Agreement State program was placed on heightened oversight following its June 2018 IMPEP. The Kansas program was found to be adequate to protect public health and safety, but needs improvement, and compatible with the NRC’s regulatory program. The Kansas program was satisfactory, but needs improvement for the performance indicators technical quality of inspections, technical quality of licensing actions, and compatibility requirements; and, unsatisfactory for the performance indicator technical quality of incidents and allegations. The NRC staff received and approved Kansas’ Program Improvement Plan and began holding periodic calls in January 2019.

Agreement State Programs On Monitoring

During CY 2018, the Georgia, Rhode Island, Massachusetts, Mississippi, and Arkansas Agreement State programs were on monitoring.

The Georgia Agreement State program was placed on probation after the 2012 IMPEP review and then heightened oversight after the 2014 IMPEP review. As a result of the 2016 IMPEP review, the Georgia program was found adequate to protect public health and safety, and compatible with the NRC’s regulatory program. At that time, the MRB acknowledged the performance improvements in the Georgia program since 2012. At the periodic meeting held in December 2018, NRC staff noted that the Georgia program continues to make improvements to ensure compliance with IMPEP requirements, and has demonstrated a sustained period of satisfactory performance. In February 2019, the NRC staff recommended and the MRB agreed to remove the Georgia program from monitoring and end the quarterly calls.

The Rhode Island Agreement State program remained on monitoring after the July 2016 IMPEP review. Based on the results of the most recent periodic meeting in October 2018, the NRC staff recommended, and MRB agreed, that while the program continues to make progress in addressing weaknesses, it has not demonstrated a period of sustained performance, and therefore should remain on monitoring.

The Massachusetts Agreement State program was placed on monitoring following its July 2014 IMPEP review. As a result of the June 2018 IMPEP review, the NRC staff recommended, and

the MRB agreed, that the Massachusetts program was adequate to protect public health and safety, and compatible with the NRC's regulatory program, and therefore the period of monitoring should be discontinued based on program improvements.

The Mississippi Agreement State program was placed on monitoring following its April 2017 IMPEP review. As a result of the April 2018 periodic meeting, the NRC staff recommended, and MRB agreed, that the Mississippi program was adequate to protect public health and safety and compatible with the NRC's regulatory program, and therefore the period of monitoring should be discontinued based on program improvements.

The Arkansas program was placed on monitoring following its December 2017 IMPEP. Based on feedback provided during quarterly monitoring calls, the Arkansas program appears to be making progress in improving aspects of its licensing program and demonstrating a sustained period of satisfactory performance. A follow-up IMPEP review has been scheduled for May 2019.

Agreement State Programs That Are Not Compatible

During CY 2018, the Kentucky and New York Agreement State programs had overall findings of adequate to protect public health and safety and not compatible with the NRC's regulatory program.

The Kentucky Agreement State program was found to be adequate to protect public health and safety but not compatible with the NRC's regulatory program following its July 2016 IMPEP review. This was the result of Kentucky's failure to adopt regulations, or other legally binding requirements, in a timely manner. The NRC staff had a periodic meeting with the staff and management from the Kentucky program in September 2018, and the associated MRB meeting will occur in spring 2019. Kentucky recently incorporated a number of NRC regulations by reference and has made significant progress in addressing compatibility issues.

The New York Agreement State program was placed on monitoring following its March 2014 IMPEP review. Based on the results of the 2018 IMPEP review, the MRB decided that the New York program was adequate to protect public health and safety but not compatible with the NRC's regulatory program, and that the period of monitoring should be discontinued. This decision was based on the New York program's progress in adopting overdue regulations and performance improvements.

Agreement State Programs Found Adequate To Protect Public Health And Safety And Compatible Due To Improved Performance

During CY 2018, two Agreement States that previously had performance issues, Colorado and North Carolina, were found to be adequate to protect public health and safety and compatible with the NRC's regulatory program due to improved performance.

In June 2014, the Colorado Agreement State program was found to be not compatible with the NRC's regulatory program due to a number of modifications to Colorado statutes. Based on the results of the April 2018 IMPEP review, the team recommended and the MRB agreed, that the Colorado program was adequate to protect public health and safety and compatible with the NRC's regulatory program.

In June 2014, North Carolina Agreement State program was found to be adequate to protect public health and safety, but needs improvement. North Carolina subsequently addressed the performance issues. Based on the results of the March 2018 IMPEP review, the staff recommended and the MRB agreed, that the North Carolina program was adequate to protect public health and safety and compatible with the NRC's regulatory program.

TRENDING ANALYSIS

The NRC staff evaluated the CY 2018 IMPEP review outcomes for trends in four areas: (1) performance indicator results, (2) adequacy and compatibility status, (3) programs on heightened oversight or monitoring, (4) analysis of IMPEP recommendations, and (5) Agreement State participation in IMPEP.

Performance Indicator Results

In CY 2018, the NRC and its Agreement State partners conducted nine full IMPEP reviews. Collectively, 68 performance indicators were assessed during the CY 2018 IMPEP reviews.

A total of 56 performance indicators (82 percent) were found to be fully satisfactory; 10 performance indicators (15 percent) were found to be satisfactory, but needs improvement; and 2 performance indicators (3 percent) were found to be unsatisfactory. While there were no significant trends, between CY 2014–CY 2017 the average percent of fully satisfactory performance indicators was 89 percent. The lower percentage of fully satisfactory performance indicators in CY 2018 can be primarily attributed to the performance of a single program that was put on heightened oversight.

In 2013, the NRC staff performed a retrospective analysis of IMPEP data from 1996–2012 and established a baseline score for performance. A maximum score of 5.0 equates to all indicators being found satisfactory, a score of 3 for satisfactory but needs improvement, and a score of 1 for an unsatisfactory. The baseline score is set at 4.6. Results for CY 2014, CY 2015, CY 2016, CY 2017, and CY 2018 are 4.7, 4.8, 4.7, 4.8, and 4.6 respectively. The data shows the National Materials Program (NMP)¹ is performing on par with the IMPEP benchmark data and that overall Agreement States performance remains strong.

Adequacy and Compatibility Status

Incorporating the CY 2018 IMPEP results into the overall summary of Agreement States' adequacy indicates that 37 programs (33 Agreement State programs and the 4 NRC programs (3 regions and the headquarters SS&D program)) were adequate to protect public health and safety. Between CY 2014–CY 2018, there was no discernable trends with regard to the number of programs that were adequate to protect public health and safety, but needs improvement.

Incorporating the CY 2018 IMPEP results into the overall summary of Agreement States' compatibility indicates that 35 of 37 Agreement State programs were found to be compatible with the NRC's regulatory program. While not statistically significant, between CY 2014–

¹ The NMP is a term used to describe the broad collective effort within which both the NRC and the Agreement States function in carrying out their respective regulatory programs for radioactive material oversight. The mission of the NMP is to provide a coherent national system for the regulation of radioactive material with the goal of protecting public health and safety through compatible regulatory programs.

CY 2018 there was a slight decrease in the number of programs that were not compatible with the NRC's regulatory program.

Programs on Heightened Oversight or Monitoring

Incorporating the CY 2018 IMPEP results into the overall summary of Agreement States' on heightened oversight or monitoring indicates that 33 of 37 Agreement States were not on heightened oversight or monitoring. Between CY 2014–CY 2018, there was no discernable trend in the number of Agreement State programs on heightened oversight or monitoring.

Analysis of IMPEP Recommendations

IMPEP teams also make recommendations associated with performance weaknesses to promote program improvement. In analyzing recommendations, the NRC staff assesses the reasons the recommendations are issued along with the number of programs exhibiting the same performance weakness. For CY 2018, 10 recommendations were made across seven of the nine performance indicators, with no dominant contributors or discernable trends. The NRC staff will monitor progress on these recommendations as part of the routine IMPEP program.

Agreement State Participation in IMPEP

During CY 2018, the NRC and its Agreement State partners conducted nine IMPEP reviews with the support of 17 Agreement State personnel. During CY 2018, 10 Agreement State personnel also served as representatives/liasons at the associated MRB meetings and a Special MRB meeting. This represents an increase in Agreement State support for IMPEP reviews and MRB meetings.

CONCLUSION

Overall, the Agreement State and NRC programs continue to adequately protect public health and safety. The IMPEP remains an important tool in terms of ensuring that public health and safety is being adequately maintained and that Agreement State programs are compatible with the NRC's regulatory program. The Agreement States continue to play a valuable role with respect to ensuring consistent implementation of the NMP in protecting the public health and safety and preventing the malevolent use of radioactive materials while allowing for their beneficial uses.

Attachments:

1. Summary of Agreement State Programs' Adequacy and Compatibility
2. Summary of NRC Programs Adequacy
3. Heightened Oversight and Monitoring Status Chart

SUMMARY OF AGREEMENT STATE PROGRAMS' ADEQUACY AND COMPATIBILITY
(As of March 2019)

STATE	FISCAL YEAR OF LAST IMPEP REVIEW	ADEQUACY FINDING	COMPATIBILITY FINDING	NEXT IMPEP REVIEW
Alabama	2015	Adequate	Compatible	2019
Arizona	2016	Adequate	Compatible	2020
Arkansas	2018	Adequate, but needs improvement	Compatible	2019
California	2016	Adequate	Compatible	2020
Colorado	2018	Adequate	Compatible	2022
Florida	2015	Adequate	Compatible	2019
Georgia	2016	Adequate	Compatible	2020
Illinois	2018	Adequate	Compatible	2023
Iowa	2017	Adequate	Compatible	2022
Kansas	2018	Adequate, but needs improvement	Compatible	2020
Kentucky	2016	Adequate	Not compatible	2020
Louisiana	2016	Adequate	Compatible	2020
Maine	2015	Adequate	Compatible	2019
Maryland	2016	Adequate	Compatible	2020
Massachusetts	2018	Adequate	Compatible	2022
Minnesota	2017	Adequate	Compatible	2022
Mississippi	2017	Adequate, but needs improvement	Compatible	2021
Nebraska	2016	Adequate	Compatible	2020
Nevada	2017	Adequate	Compatible	2021
New Hampshire	2017	Adequate	Compatible	2021
New Jersey	2015	Adequate	Compatible	2019
New Mexico	2017	Adequate	Compatible	2021
New York	2018	Adequate	Not compatible	2022
North Carolina	2018	Adequate	Compatible	2022
North Dakota	2015	Adequate	Compatible	2019
Ohio	2014	Adequate	Compatible	2019

STATE	FISCAL YEAR OF LAST IMPEP REVIEW	ADEQUACY FINDING	COMPATIBILITY FINDING	NEXT IMPEP REVIEW
Oklahoma	2018	Adequate	Compatible	2023
Oregon	2017	Adequate	Compatible	2021
Pennsylvania	2014	Adequate	Compatible	2019
Rhode Island	2016	Adequate, but needs improvement	Compatible	2020
South Carolina	2017	Adequate	Compatible	2022
Tennessee	2016	Adequate	Compatible	2021
Texas	2018	Adequate	Compatible	2022
Utah	2018	Adequate	Compatible	2019
Virginia	2018	Adequate	Compatible	2022
Washington	2018	Adequate	Compatible	2022
Wisconsin	2014	Adequate	Compatible	2019
Wyoming ¹	2018	Adequate	Compatible	2020

¹ Wyoming Agreement signed September 25, 2018, with the first IMPEP review scheduled in 2020.

SUMMARY OF NRC PROGRAMS' ADEQUACY
(As of March 2019)

REGION	FISCAL YEAR OF LAST IMPEP REVIEW	ADEQUACY FINDING	NEXT IMPEP REVIEW
Headquarters Sealed Source and Device Program	2015	Adequate	2020
Region I	2015	Adequate	2020
Region III	2017	Adequate	2022
Region IV	2014	Adequate	2019

HEIGHTENED OVERSIGHT AND MONITORING STATUS CHART
(As of March 2019)

STATE	LAST IMPEP REVIEW	LAST CONTACT	NEXT CONTACT	ACTION(S) DUE
HEIGHTENED OVERSIGHT				
Kansas	Jun. 25-29, 2018	Periodic Call Jan. 28, 2019	Periodic Call April 18, 2019	<ol style="list-style-type: none"> 1. Periodic Calls 2. Review of Program Improvement Plan 3. Periodic Meeting in June 2019 4. IMPEP Review in Jun. 2020
MONITORING				
Arkansas	Nov. 27, 2017 – Dec. 1, 2017	Quarterly Call Jan. 31, 2019	Follow Up IMPEP Review May 21, 2019	<ol style="list-style-type: none"> 1. Quarterly calls 2. Follow Up IMPEP Review in May 2019
Rhode Island	Mar. 7 – 10, 2016	Quarterly Call Jan. 15, 2019	Quarterly Call April 2019	<ol style="list-style-type: none"> 1. Quarterly Calls 2. IMPEP Review in Mar. 2020