



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

March 12, 2024

MEMORANDUM TO:

John Lubinski, Director
Office of Nuclear Material Safety
and Safeguards

Robert Lewis, Deputy Director
Office of Nuclear Material Safety
and Safeguards

Jessica Bielecki, Assistant General Counsel for Rulemaking,
Agreement States, and Fee Policy
Office of the General Counsel

Daniel Collins, Deputy Regional Administrator
Region III

FROM:

Adelaide S. Giantelli, Chief
State Agreement and Liaison Programs Branch
Division of Materials Safety, Security, State,
and Tribal Programs
Office of Nuclear Material Safety
and Safeguards

A handwritten signature in black ink, appearing to read "Adelaide S. Giantelli".

Signed by Giantelli, Adelaide
on 03/12/24

SUBJECT:

PROPOSED FINAL ARKANSAS AGREEMENT STATE
FOLLOW-UP INTEGRATED MATERIALS PERFORMANCE
EVALUATION PROGRAM REPORT

This memorandum transmits to the Management Review Board (MRB) the proposed final report (Enclosure 1) documenting the follow-up Integrated Materials Performance Evaluation Program (IMPEP) review of the State of Arkansas. The follow-up IMPEP review focused on the performance indicators Technical Staffing and Training, Status of Materials Inspection Program, Technical Quality of Licensing Actions, and Technical Quality of Incident and Allegation Activities. The IMPEP review was conducted by a team of U.S. Nuclear Regulatory Commission (NRC) and Agreement State technical staff between January 29-February 2, 2024. The team's preliminary findings were discussed with representatives of the State of Arkansas on the last day of the review. The team issued a draft report to Arkansas on February 16, 2024, for factual comment (NRC's Agencywide Documents Access and Management System (ADAMS) Accession Number [ML24043A180](#)). Arkansas responded to the draft report by letter dated February 29, 2024, from Shane David, Branch Chief, Health Systems, Licensing and Certification, Arkansas Department of Health available in ADAMS ([ML24043A180](#)).

CONTACT: Binesh Tharakan
Binesh.Tharakan@nrc.gov

The team found Arkansas' performance satisfactory for the performance indicators: Status of Materials Inspection Program, Technical Quality of Licensing Actions, and Technical Quality of Incident and Allegation Activities. The team also found Arkansas' performance unsatisfactory for the performance indicator: Technical Staffing and Training.

The team is proposing one new recommendation for Arkansas to:

- Analyze the factors adversely affecting staffing trends and take action to improve recruitment and retention to maintain a sufficiently qualified technical staff.

The team is proposing that Arkansas be found adequate to protect public health and safety, but needs improvement, and compatible with the NRC's regulatory program. The team is also proposing that a full IMPEP review take place in approximately one year. Further, the team recommends that Arkansas be placed on 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.

The MRB meeting for Arkansas' follow-up IMPEP review is scheduled to be conducted on March 27, 2024, from 1:00 p.m. to 3:30 p.m. ET, as a hybrid meeting from TWFN-06D02 and via Microsoft Teams. In accordance with MD 5.6, the meeting is open to the public, and characterized as an NRC Observation Public Meeting. The agenda for the meeting is provided as Enclosure 2.

If you have any questions regarding the enclosed report, please contact Binesh Tharakan, at Binesh.Tharakan@nrc.gov.

Enclosures:

1. Arkansas Agreement State Program IMPEP Review
2. Arkansas Agreement State Program MRB Meeting Agenda

cc: Stephen James, Supervisor
Agreement State Program
Bureau of Environmental Health and Radiation Protection
Ohio Department of Health



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

JANUARY 30-FEBRUARY 2, 2024

PROPOSED FINAL REPORT

EXECUTIVE SUMMARY

The results of the follow-up Integrated Materials Performance Evaluation Program (IMPEP) review of the Arkansas Agreement State Program (Arkansas) are discussed in this report. The follow-up IMPEP review focused on the performance indicators Technical Staffing and Training, Status of Materials Inspection Program, Technical Quality of Licensing Actions, and Technical Quality of Incident and Allegation Activities. The review was conducted in-person from January 30, 2024, to February 2, 2024.

Based on the results of the 2024 follow-up IMPEP review, the team found Arkansas' performance satisfactory for the following performance indicators: Status of Materials Inspection Program, Technical Quality of Licensing Actions, and Technical Quality of Incident and Allegation Activities. The team also found Arkansas' performance unsatisfactory for the following performance indicator: Technical Staffing and Training. The 2024 IMPEP team did not review the Technical Quality of Inspections or Legislation, Regulations, and Other Program Elements performance indicators. These two performance indicators were discussed at a periodic meeting held on January 31, 2024. The Arkansas Periodic Meeting Summary is provided in Appendix B.

The team is proposing one new recommendation for Arkansas to:

- Analyze the factors adversely affecting staffing trends and take action to improve recruitment and retention to maintain a sufficiently qualified technical staff.

The team also proposed that the three recommendations from the 2022 IMPEP review should be closed.

Accordingly, the team recommends that the Arkansas radiation control program be found adequate to protect public health and safety, but needs improvement, and compatible with the NRC's regulatory program. The team recommends that a full IMPEP review take place in approximately one year. Further, the team recommends that Arkansas be placed on a period of Heightened Oversight.

1.0 INTRODUCTION

The Arkansas Agreement State Program (Arkansas) follow-up Integrated Materials Performance Evaluation Program (IMPEP) review was conducted from January 30, 2024, to February 2, 2024, by a team of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the States of Arizona and Tennessee. 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* 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 from January 29, 2022, to February 2, 2024, were discussed with Arkansas’ managers on the last day of the review.

In preparation for the follow-up review, a questionnaire addressing the common performance indicators and applicable non-common performance indicators was sent to Arkansas on November 29, 2023. Arkansas provided its response to the questionnaire on January 22, 2024. A copy of the questionnaire response is available in the NRC’s Agencywide Documents Access and Management System (ADAMS) Accession Number [ML24029A149](#).

The 2024 IMPEP team sent a draft report to Arkansas February 16, 2024, for review and factual comment available in ADAMS [ML24043A180](#). Arkansas responded to the draft report by letter dated February 29, 2024, from Shane David, Branch Chief, Health Systems, Licensing and Certification, Arkansas Department of Health available in ADAMS [ML24065A408](#).

Arkansas is administered by the Radioactive Materials Program (Program). The Program is one of three organizations within the Radiation Control Section (Section), which is a part of the Health Systems Licensing and Certification Branch (Branch). The Branch is part of the Center for Health Protection within the Arkansas Department of Health. The Secretary of Health leads the Department and reports to the Governor of Arkansas. Organization charts for Arkansas are available in ADAMS [ML24029A151](#).

At the time of the review, Arkansas regulated 168 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 Arkansas.

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 Arkansas’ performance.

2.0 PREVIOUS IMPEP REVIEW AND STATUS OF RECOMMENDATIONS

The previous IMPEP review concluded on January 28, 2022. The final report is available in ADAMS [ML22135A001](#). The results of the review and the status of the associated recommendations 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 but Needs Improvement

Recommendation 1: Identify additional measures to help improve the thoroughness, completeness, and consistency of the license reviews, as well as to ensure license reviews are of acceptable technical quality with health, safety, and security properly addressed.

Status: The review team determined that Arkansas updated standard license conditions; and developed and implemented checklists to improve consistency and technical quality of licensing actions. These actions have improved the technical quality of licensing actions. The team recommends that this recommendation be closed.

Recommendation 2: Implement the updated Risk-Significant Radioactive Materials (RSRM) checklist and provide additional training to ensure consistent implementation of the most up to date RSRM checklist.

Status: The review team determined that the Arkansas updated the RSRM checklist and is using it in all the cases that were reviewed. Arkansas provided training on the updated RSRM checklist. The team recommends that this recommendation be closed.

Recommendation 3: Implement a financial assurance program consistent with State regulations and provide additional training to ensure that staff understand the thresholds.

Status: The review team determined that the Arkansas updated its financial assurance reviews to be consistent with State regulations. Arkansas provided training on financial assurance reviews and understood the financial assurance thresholds. The team recommends that this recommendation be closed.

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

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.

Based on the results of the 2022 Arkansas IMPEP review, the MRB Chair directed that a follow-up IMPEP review of the Technical Quality of Licensing Actions performance indicator take place in approximately two years and a Periodic Meeting take place in one year. The Periodic Meeting was conducted on January 19, 2023. A periodic meeting summary is available at [ML24005A019](#). Arkansas notified the NRC in December 2023, that the Program had lost additional experienced and qualified staff. Subsequently, based on Arkansas' notification about adequate staffing for the Program, the MRB Chair expanded the scope of the 2024 follow-up IMPEP review to also include the Technical Staffing and Training, Status of Materials Inspection Program, and Technical Quality of Incident and Allegation Activities performance indicators. The 2024 IMPEP team did not review the Technical Quality of Inspections or Legislation, Regulations, and Other Program Elements performance indicators. These two performance

indicators were discussed at a periodic meeting held on January 31, 2024. The Arkansas Periodic Meeting Summary is provided in Appendix B.

3.0 COMMON PERFORMANCE INDICATORS

The expanded follow-up IMPEP review focused on the following common performance indicators: (1) Technical Staffing and Training, (2) Status of Materials Inspection Program, (3) Technical Quality of Licensing Actions, and (4) 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 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) [SA-103](#), "Reviewing the Common Performance Indicator: Technical Staffing and Training," and evaluated Arkansas' 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.

b. Discussion

Arkansas is comprised of eight staff members including the Section chief, a Section health physicist, the Program supervisor, four health physicists, and one administrative staff member. The Program also has a contract health physicist that performs licensing actions. This equates to about 6.5 full-time equivalent positions for the Program.

The Program started the review period with one vacancy. During the review period, seven staff members left the Program, including the program supervisor, and six were hired into the Program. Three of the six staff members that left the Program were qualified and

experienced senior staff. Of the three qualified and experienced staff that left, two retired and another left the program for another position. Multiple vacancies regularly existed in the Program throughout the review period. At the time of the review, there were two health physicist vacancies and Arkansas management had not yet taken any action to fill them and two health physicist positions were filled with staff that were recently hired with limited radioactive materials program. One of the new health physicists has several years of administrative experience with Arkansas' licensing processes and has been instrumental in the Program's transition to Web-Based Licensing. The other new health physicist has experience in the nuclear power industry and spent nuclear fuel cask storage. Both individuals started their training with an introduction to health physics principles.

Arkansas has a training and qualification program that is consistent with NRC's IMC 1248. The training program is administered by the program supervisor who meets with staff under qualification and works with them as the individual traverses through the training process. Once training is completed, the Section chief documents their qualification in a letter. During the review period, the current Program supervisor, and a health physicist (no longer with the program) received the qualification letter.

The staff and the supervisor are responsible for all licensing and inspection activities. The Program supervisor reports to the Section chief who signs off on all licensing actions and inspection reports. The Section's health physicist primarily works on regulations, incident reports, serves as an advisor to the Section chief, and is the Section's radiation safety officer. Both the Section chief and Section's health physicist are qualified license reviewers and inspectors, although neither one has independently performed inspections in several years. The program also has a contract health physicist that performs licensing actions. The team confirmed that the contract health physicist, the Section chief, the Section health physicist, and Program supervisor have maintained qualifications by attending the required 24-hours of refresher training every two years.

The team noted through interviews with staff and management that Arkansas has historically had difficulty recruiting and retaining qualified staff. At the time of the review, Arkansas' management did not provide the team with an analysis demonstrating that management had taken action to address attrition over the last several IMPEP reviews. In Arkansas' response they indicated they have attempted to fill the vacancies as qualified applicants have been located through their hiring process. Arkansas also implemented an approach of promoting within the program to address staff attrition and turnover.

The loss of, and difficulty recruiting, qualified staff has started to have an adverse impact on licensing, inspections, and regulation development. Examples included more overdue inspections, an accrual of licensing actions, and an increased length of time to promulgate and process regulatory packages. During the 2022 IMPEP review, only 1 of 133 inspections were overdue over a four-year period, as compared to the current two-year review period where 5 of 64 inspections were overdue. Additionally, the 2022 IMPEP review found that Arkansas conducted 22 of 129 reciprocity inspections over a four-year period, as compared to 2 of 67 during the current 2-year review period. The Program reported that if they had additional qualified inspectors, they would have inspected more reciprocity licensees and reduced the number of overdue inspections. The Program also reported that the number of open licensing actions were increasing due to the shortage of qualified license reviewers.

During the periodic meeting, the Program indicated that regulation promulgation also slowed down due to competing priorities for the Section's health physicist. Some work priorities had

to be shifted to incident response cases due to a shortage of qualified staff to perform follow-up investigations. The Program reported that maintaining satisfactory performance for the projected workload was not sustainable, especially given the current vacancies and significant amount of training required for the new staff.

c. Evaluation

The team determined that, during the review period, Arkansas met the performance indicator objectives listed in Section 3.1.a, except for:

- 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.
- 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.

As discussed above, the Program has difficulty recruiting and retaining qualified staff. Significant turnover among senior qualified staff members and new hires has started impacting Program performance. The team found that the ongoing staffing issues are starting to adversely impact at least three other performance indicators. There was little management attention given to addressing the staffing problems prior to the review team requesting information about the status of staffing vacancies and training. The Program did not retain staff long enough for them to complete the training requirements in NRC Inspection Manual Chapter 1248 within the timelines outlined.

Given the significant staffing challenges, the team is proposing one new recommendation for Arkansas to:

- Analyze the factors adversely affecting staffing trends and take action to improve recruitment and retention to maintain a sufficiently qualified technical staff.

Based on the IMPEP evaluation criteria in MD 5.6, the team recommends that Arkansas' performance with respect to the indicator, Technical Staffing and Training, be found unsatisfactory.

d. MRB Discussion and Chair's Determination

The final report will present the MRB Chair's determination regarding this indicator.

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 Arkansas’ 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

Arkansas performed 64 Priority 1, 2, 3, and initial inspections during the review period. The team found that Arkansas conducted 7.8 percent of Priority 1, 2, 3, and initial inspections overdue during the review period. Four Priority 1 and one Priority 3 inspections were performed overdue. No initial inspections were performed overdue. The overdue inspections were the result of inadequate staffing.

Arkansas’ inspection frequencies were the same for similar license types in NRC’s program. A sampling of 36 inspection reports indicated that inspection findings were communicated to the licensees in accordance with Arkansas’ goal of 30 days after the inspection exit.

Arkansas inspected 2 of the 27 reciprocity licensees during the review period. The team noted that Arkansas’s guidance for conducting reciprocity inspections indicates that the reciprocity inspections shall be performed in a performance-based, risk-informed manner. The team noted that the Arkansas’s guidance for conducting reciprocity inspections is consistent with the guidance in IMC 2800. The team reviewed the reciprocity inspections and determined that they were performed consistent with the policy.

c. Evaluation

The team determined that, during the review period, Arkansas met the performance indicator objectives listed in Section 3.2.a. Based on the criteria in MD 5.6, the team recommends that Arkansas’s performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

d. MRB Discussion and Chair’s Determination

The final report will present the MRB Chair’s determination regarding this indicator.

3.3 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 Arkansas 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 Arkansas' 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 RSRM 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, Arkansas performed 2,227 radioactive materials licensing actions. Arkansas includes notifications and communications with licensees in the total number of licensing actions. The team evaluated 20 of the completed licensing actions. The licensing actions selected for review included 2 new applications, 10 amendments (including two 10 CFR Part 37 reviews), 1 termination, 3 renewals (including one 10 CFR Part 37 review), 2 bankruptcy and 2 financial assurance/decommissioning actions. The team evaluated casework which included the following license types and actions: broad scope, medical diagnostic and therapeutic medical, commercial radiopharmacy, industrial radiography, irradiator, well logging, portable and fixed gauges, veterinary, transfer of control, security, and financial assurance. The casework sample represented work from nine current and former license reviewers.

The team determined that all the licensing actions reviewed were well-documented and properly addressed health, safety, and security issues. In all cases deficiency letters were clear and used at appropriate times. The license reviewers were aware of the licensee's

inspection and enforcement history when evaluating license renewals. Files containing information for licensees possessing Category 1 or Category 2 quantities of radioactive material were marked with an identifying label and secured in a lockable file cabinet. The team determined that Arkansas has implemented a compatible procedure to the NRC's "Checklist to Provide a Basis for Confidence that Radioactive Material will be Used as Specified on the License" (Pre-licensing Guidance). The team determined that the Pre-licensing Guidance checklist was being implemented in all applicable cases reviewed, including new license applications and change of control amendments. The team also determined that Arkansas was using the RSRM checklist for all radioactive materials licensing actions.

The 2022 IMPEP report documented three recommendations to improve Arkansas' performance in this indicator. (Section 3.4 of the 2022 IMPEP Report).

Recommendation 1: Identify additional measures to help improve the thoroughness, completeness, and consistency of the license reviews, as well as to ensure license reviews are of acceptable technical quality with health, safety, and security properly addressed.

Recommendation 2: Implement the updated RSRM checklist and provide additional training to ensure consistent implementation of the most up to date RSRM checklist.

Recommendation 3: Implement a financial assurance program consistent with State regulations and provide additional training to ensure that staff understand the thresholds.

The review team found that Arkansas had updated standard license conditions and developed and implemented checklists to improve consistency and technical quality of licensing actions. Arkansas provided training on the updated RSRM checklist and financial assurance program. The team determined that these actions improved the technical quality of licensing actions. Therefore, the team recommends that all three of these recommendations be closed.

c. Evaluation

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

d. MRB Discussion and Chair's Determination

The final report will present the MRB Chair's determination regarding this indicator.

3.4 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 Arkansas’ 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

Arkansas maintains an incident and allegation logbook where they record all incoming notifications without regard to the significance of the information received. During the review period, Arkansas made 23 entries into the logbook, and of those entries, the Program determined that 13 met the threshold for reporting to the NMED database. The team reviewed all 13 of those reported incidents as well as 2 additional logbook entries. The incidents reviewed included one leaking source, one gauge found in a scrap yard shipment, one lost source, three damaged gauges, one potential overexposure, one event involving physicians self-injecting themselves with radioactive material to test equipment, two medical events, two lost packages in shipment, and one contamination event at a radiopharmacy. Inspectors were dispatched for on-site follow-up for most of the cases reviewed.

At the time of the 2022 IMPEP review, Arkansas had been following their long-established procedure which stated in part, that when an event is reported, management will evaluate the event to determine its health and safety significance and then decide on the appropriate response. At the time of the 2024 IMPEP review, Arkansas still used the same procedure; however, the previous supervisor, who had been in place for most of the review period, changed the practice to rely on the individual who took the call to make the significance assessment and follow-up on the event independently. The team found that Arkansas’ evaluation of incident notifications was thorough, complete, and comprehensive. The team found no specific instances where this change in practice negatively impacted the Program. The team discussed this change with the current Program management, and the potential for inadequate or incomplete follow-up on events if the practice continued.

The team also evaluated the Arkansas’ reporting of incidents to the NRC’s Headquarters Operations Officer (HOO). The team noted that in each case requiring HOO notification, the State reported the incident within the required time frame. The team also evaluated whether the State had not reported any required incidents to the HOO. The team did not identify any missed reporting requirements.

During the review period, no allegations were received directly by Arkansas. One allegation was referred from NRC to Arkansas in November 2023. At the time of the review, the Program was not aware of the NRC referred allegation. After the IMPEP team notified the Arkansas about the allegation, Arkansas initiated action to investigate the allegation. When allegations are received and investigated by Arkansas, concerned individuals are notified of the actions taken, and allegeders' identities are protected whenever possible in accordance with state law.

c. Evaluation

The team determined that, during the review period, Arkansas met the performance indicator objectives listed in Section 3.5.a. Based on the criteria in MD 5.6, the team recommends that Arkansas' performance with respect to the indicator, Technical Quality of Incident and Allegation Activities, be found satisfactory.

d. MRB Discussion and Chair's Determination

The final report will present the MRB Chair's determination regarding this indicator.

4.0 SUMMARY

Based on the results of the 2024 follow-up IMPEP review, the team found Arkansas' performance to be satisfactory for the following performance indicators: Status of Materials Inspection Program; Technical Quality of Licensing Actions; Technical Quality of Incident and Allegation Activities. The team also found Arkansas' performance to be unsatisfactory for the performance indicator: Technical Staffing and Training.

The 2024 IMPEP team did not review the Technical Quality of Inspections or Legislation, Regulations, and Other Program Elements performance indicators. These two performance indicators were discussed at a periodic meeting held on January 31, 2024. The Arkansas Periodic Meeting Summary is provided in Appendix B.

The team is proposing one new recommendation for Arkansas to:

- Analyze the factors adversely affecting staffing trends and take action to improve recruitment and retention to maintain a sufficiently qualified technical staff.

The team recommended that the following three 2022 IMPEP review recommendations should be closed:

Recommendation 1: Identify additional measures to help improve the thoroughness, completeness, and consistency of the license reviews, as well as to ensure license reviews are of acceptable technical quality with health, safety, and security properly addressed.

Recommendation 2: Implement the updated RSRM checklist and provide additional training to ensure consistent implementation of the most up to date RSRM checklist.

Recommendation 3: Implement a financial assurance program consistent with State regulations and provide additional training to ensure that staff understand the thresholds.

Accordingly, the team recommends that Arkansas be found adequate to protect public health and safety, but needs improvement, and compatible with the NRC's regulatory program. The team recommends that a full IMPEP review take place in approximately one year. Further, the team recommends that Arkansas be placed on a period of Heightened Oversight.

LIST OF APPENDICES

- APPENDIX A IMPEP Review Team Members
- APPENDIX B Periodic Meeting Summary

APPENDIX A – IMPEP REVIEW TEAM MEMBERS

Name	Areas of Responsibility
Binesh Tharakan, CHP Region IV	Team Leader Technical Staffing and Training
Steve Seeger State of Tennessee	Status of Materials Inspection Program
Philip Kern State of Arizona	Technical Quality of Licensing Actions
Randy Erickson Region IV	Technical Quality of Incident and Allegation Activities

APPENDIX B – PERIODIC MEETING SUMMARY



INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

ARKANSAS AGREEMENT STATE PERIODIC MEETING SUMMARY

TYPE OF OVERSIGHT: NONE

JANUARY 31, 2024

PERIODIC MEETING PARTICIPANTS

NRC

- Kevin Williams, Director, Division of Materials Safety, Security, State and Tribal Programs, NMSS
- Tammy Bloomer, Director, Division of Nuclear Materials Safety, NRC Region IV
- Randy Erickson, RSAO, NRC Region IV
- Binesh Tharakan, IMPEP Team Leader, NRC Region IV

State of Arkansas

- Connie Melton, Center Director, Center for Health Protection
- Shane David, Branch Chief, Health Systems, Licensing and Certification
- Bernard Bevill, Section Chief, Radiation Control Section
- Susan Elliott, Manager, Radiation Control Program
- Angela Minden, Health Physicist
- Tracy Land, Health Physicist
- David Eichenberger, Health Physicist

1.0 INTRODUCTION

This report presents the results of the periodic meeting held between the U.S. Nuclear Regulatory Commission (NRC) and the State of Arkansas. The meeting was held on January 31, 2024, and was conducted in accordance with Nuclear Materials Safety and Safeguards (NMSS) Procedure SA-116, "Periodic Meetings between IMPEP Reviews," dated October 29, 2021; and was held concurrently with the 2024 follow-up Integrated Materials Performance Evaluation Program (IMPEP) review.

Arkansas is administered by the Radioactive Materials Program (Program). The Program is one of three organizations within the Radiation Control Section (Section), which is a part of the Health Systems Licensing and Certification Branch (Branch). The Branch is part of the Center for Health Protection within the Arkansas Department of Health. The Secretary of Health leads the Department and reports to the Governor of Arkansas. Organization charts for Arkansas are available in NRC's Agencywide Documents Access and Management System (ADAMS) Accession Number ([ML24029A151](#)).

At the time of the meeting, Arkansas regulated approximately 168 specific licenses authorizing possession and use of radioactive materials. The meeting focused on the radioactive materials program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Arkansas.

Arkansas last underwent a full IMPEP review from January 24-28, 2022. That report is available in ADAMS [ML22135A001](#). A Management Review Board (MRB) meeting to discuss the outcome of the IMPEP review was held on April 28, 2022.

During the 2022 MRB meeting, Arkansas's performance was found satisfactory but needs improvement for the performance indicator Technical Quality of Licensing Actions and satisfactory for all other indicators reviewed. The team recommended, and the MRB agreed, to modify the recommendation from the 2017 IMPEP review and add two new recommendations. Accordingly, the MRB Chair found Arkansas adequate to protect public health and safety, and compatible with the NRC's program. In addition, the MRB Chair directed that a follow-up IMPEP review of the Technical Quality of Licensing Actions performance indicator take place in approximately two years and a Periodic Meeting of the satisfactory performance indicators take place in one year. The periodic meeting was conducted on January 19, 2023, see the meeting summary at [ML24005A019](#). The Program reported the departure of a significant number of experienced staff at the end of 2023. As a result, the MRB Chair directed that the scope of the 2024 follow-up IMPEP review be expanded to include Technical Staffing and Training, Status of Materials Inspection Program, and Technical Quality of Incidents and Allegations Activities performance indicators.

2.0 COMMON PERFORMANCE INDICATORS

Five common performance indicators are used to review the NRC's Regional Office and Agreement State radioactive materials programs during an IMPEP review. 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.

Because the periodic meeting was held concurrently with the follow-up IMPEP review and the focus of that review was limited in scope, the periodic meeting, also limited in scope, was a discussion of those indicators not reviewed during the follow-up IMPEP.

2.1 Technical Staffing and Training
(2022 IMPEP Rating: Satisfactory)

The performance indicator Technical Staffing and Training was reviewed during the 2024 follow-up IMPEP review. See 2024 follow-up IMPEP report for the results.

2.2 Status of the Materials Inspection Program
(2022 IMPEP Rating: Satisfactory)

The performance indicator Status of the Materials Inspection Program was reviewed during the 2024 follow-up IMPEP review. See 2024 follow-up IMPEP report for the results.

2.3 Technical Quality of Inspections
(2022 IMPEP Rating: Satisfactory)

While the IMPEP review team did not evaluate this indicator, it was discussed during this periodic meeting. The 2022 IMPEP review team found the inspection procedures used by Arkansas to be equivalent to NRC's inspection procedures, and Arkansas has not made any changes since that review. Arkansas issues all inspection findings, regardless of whether there is a violation, by written correspondence from the office. Previously inspection documentation developed by the inspector was reviewed and signed out by the Program manager. Currently the reports are now reviewed and signed out by the Section chief, and they are routinely sent to the licensee within 30 days of the completion of an inspection.

Inspector accompaniments continue to be performed annually for all qualified inspectors performing inspections. Since most of the inspection staff is not fully qualified, they are accompanied on the modalities for which they have received qualification. Newer inspectors typically receive more than one inspector accompaniment each year to enhance training opportunities.

2.4 Technical Quality of Licensing Actions
(2022 IMPEP Rating: Satisfactory but needs Improvement)

The performance indicator Technical Quality of Licensing Actions was reviewed during the 2024 follow-up IMPEP review. See 2024 follow-up IMPEP report for the results.

2.5 Technical Quality of Incident and Allegation Activities
(2022 IMPEP Rating: Satisfactory)

The performance indicator Technical Quality of Incident and Allegation Activities was reviewed during the 2024 follow-up IMPEP review. See 2024 follow-up IMPEP report for the results.

3.0 NON-COMMON PERFORMANCE INDICATORS

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

3.1 Legislation, Regulations and Other Program Elements (2022 IMPEP Rating: Satisfactory)

A legislative change occurring in 2019 which affected the Program, and which is still in effect and was previously discussed during the 2022 IMPEP review requires Arkansas to change all regulatory documents from the wording from "Rules and Regulations" to "Rules" (Act 315 – 2019). This requires the Program to amend all regulations, licenses/license conditions, forms, etc., to remove references to the word, "regulation." This requirement is still in effect.

Another change reported by the Program came in the form of an executive order issued by the new Governor on January 10, 2023, and states, "Unless granted an exemption by the Governor or exempted under a specific provision of Arkansas law, that all state departments, agencies, and offices shall submit to the Governor for her review and approval all proposed rules prior to appearing before a legislative committee of the General Assembly regarding rulemaking procedure."

At the time of the 2023 periodic meeting, there were two regulation amendments that were overdue for adoption and included RATS ID: 2018-1 and 2019-2. At the time of the 2024 review, those two amendments along with 2020-1, 2020-2 and 2020-3 also became overdue. Arkansas reported that all five amendments are currently making their way through the 3rd and final legislative appearance prior to becoming final. This is anticipated to occur March 2024.

During the periodic meeting, discussions were held regarding guidance documents maintained and used by the Program, and how they use those guidance documents are used to meet the requirements of other program elements (e.g., Pre-Licensing Guidance, Inspection Procedures, Reciprocity Procedures, etc.) that the NRC has designated as necessary for the maintenance of an adequate and compatible program. Arkansas understands that these are living documents and changes should be made to them as necessary. The only procedure that needs to be addressed is discussed in Section 3.5 of the 2024 IMPEP report.

3.2 Low-Level Radioactive Waste (LLRW) Disposal Program (2022 IMPEP Rating: Not Reviewed)

In 1981, the NRC amended its Policy Statement, "Criteria for Guidance of States and NRC in Discontinuance of NRC Regulatory Authority and Assumption Thereof by States Through Agreement," to allow a State to seek an amendment for the regulation of LLRW as a separate category. Although Arkansas has authority to regulate a LLRW disposal facility, the NRC has not required States to have a program for licensing a disposal facility until such time as the State has been designated as a host State for a LLRW

disposal facility. When an Agreement State has been notified or becomes aware of the need to regulate a LLRW disposal facility, it is expected to put in place a regulatory program that will meet the criteria for an adequate and compatible LLRW disposal program. There are no plans for a commercial LLRW disposal facility in Arkansas. Accordingly, this indicator was not reviewed.

4.0 SUMMARY

During this periodic meeting, the only two performance indicators discussed were the Technical Quality of Inspections indicator and the Legislation, Regulations and Other Program Elements indicator. The remaining performance indicators were reviewed during the follow-up IMPEP review.

**Arkansas Agreement State Program Management Review Board Meeting Agenda
March 27, 2024, 1:00 p.m. – 3:30 p.m. (ET), TWFN-06D02 and via Microsoft**

1. Meeting Convened.
 - a. Announcement of NRC Public Observation Meeting.
 - b. Introduction of MRB members, review team members, Agreement State representatives, and other participants.
 - c. Request for members of the public to identify themselves and their affiliation.
2. MRB Chair Convenes the Business Portion of the Meeting.
 - a. Consideration of the Agreement State's IMPEP Report.
 - b. Presentation of Performance Indicator Findings for the Agreement State's Program and Discussion:
 - i. Technical Staffing and Training
 - ii. Status of Materials Inspection Program
 - iii. Technical Quality of Licensing Actions
 - iv. Technical Quality of Incident and Allegation Activities
 - c. IMPEP Team Recommendations.
 - d. MRB Consultation/Comments on Issuance of Report.
 - e. Request for comments from the Agreement State representatives, MRB Members, and IMPEP team members.
 - f. Overall MRB Chair Determination.
3. MRB Chair Closes the Business Portion of the Meeting
4. Questions or comments from members of the public.
5. Meeting adjournment.

PROPOSED FINAL ARKANSAS AGREEMENT STATE FOLLOW-UP INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM REPORT DATE March 12, 2024

DISTRIBUTION:

- JLubinski, NMSS
- RLewis, NMSS
- JBielecki, OGC/GCRPS/HLWFCNS/NLO
- DCollins, R-I/DRP
- KWilliams, NMSS/MSST
- TClark, NMSS/MSST
- TBloomer, RES/DSA/AAB
- LRoldan-Otero, NMSS/MSST/SLPB
- RErickson, R-IV/DNMS/MIB
- AGiantelli, NMSS/MSST/SMPB
- LSmith, NMSS/MSST
- RJohnson, NMSS/MSST/SLPB
- BTharakan, R-IV/DNMS
- AWhite, NMSS/MSST/SLPB
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NAME	BTharakan <i>BT</i>	RErickson <i>RE</i>	LSmith <i>LS</i>	RJohnson <i>RJ</i>
DATE	Mar 8, 2024	Mar 8, 2024	Mar 11, 2024	Mar 11, 2024
OFFICE	NMSS/MSST/SMPB			
NAME	AGiantelli <i>AG</i>			
DATE	Mar 12, 2024			

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