



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

July 7, 2023

Michele Jones, Chief of Staff  
Alabama Department of Public Health  
201 Monroe Street  
Montgomery, AL 36104

Dear Michele Jones:

The U.S. Nuclear Regulatory Commission (NRC) uses the Integrated Materials Performance Evaluation Program (IMPEP) to review Agreement State and NRC radiation control programs. Enclosed is the draft IMPEP report that documents the results of the Alabama Agreement State review conducted on May 22-26, 2023. The team's preliminary findings were discussed with you and your staff on the last day of the review. The team's proposed recommendations are that the Alabama Agreement State Program be found adequate to protect public health and safety and compatible with the NRC's program.

The NRC conducts periodic reviews of radiation control programs to ensure that public health and safety are adequately protected from the potential hazards associated with the use of radioactive materials and that Agreement State programs are compatible with the NRC's program. The IMPEP process uses a team comprised of Agreement State and NRC staff to perform the reviews. All reviews use common criteria in the assessment and place primary emphasis on performance. The final determination of adequacy and compatibility of each program, based on the team's report, is made by the Chair of the Management Review Board (MRB) after receiving input from the MRB members. The MRB is composed of NRC senior managers and an Agreement State program manager.

In accordance with the procedures for implementation of the IMPEP, we are providing you with a copy of the draft report for your review and comment prior to submitting the report to the MRB. Comments are requested within four weeks from your receipt of this letter. This schedule will permit the issuance of the final report in a timely manner. If there are no comments on the IMPEP report, the MRB will receive the draft IMPEP report. If there are comments on the report, the team will review your response, make the necessary changes, and issue a proposed final report to the MRB.

The MRB meeting is scheduled to be conducted at NRC Headquarters in Rockville, Maryland, on August 31, 2023, at 1:00 PM ET (conference room OWFN17-B04 and streamed via Teams). The NRC will provide invitational travel for you or your designee to attend the MRB meeting in-person. Alternatively, since the team is recommending that all performance indicators be found satisfactory, you may prefer to attend the MRB meeting remotely.

M. Jones

-2-

If you have any questions regarding the enclosed report, please contact me at 301-415-0324 or Ryan Craffey, the IMPEP team leader, at 630-829-9655.

Thank you for your cooperation.

Sincerely,



Signed by Giantelli, Adelaide  
on 07/07/23

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

Enclosure:  
2023 Alabama Draft IMPEP Report

cc: Cason Coan, Director, Office of  
Radiation Control  
J. Nick Swindall, Assistant Director,  
Office of Radiation Control

SUBJECT: ALABAMA FY2023 DRAFT IMPEP REPORT – JULY 7, 2023

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

MAY 22-26, 2023

**DRAFT REPORT**

## **EXECUTIVE SUMMARY**

The results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the Alabama Agreement State Program are discussed in this report. The review was conducted from May 22-26, 2023. In-person inspector accompaniments were conducted during the week of April 24, 2023.

The team found Alabama's performance to be satisfactory for all performance indicators.

The team determined that the recommendation from the 2019 review should be closed and did not make any recommendations.

Accordingly, the team recommends that the Alabama Agreement State Program be found adequate to protect public health and safety and compatible with the NRC's program. The team recommends that a periodic meeting take place in approximately two years with the next IMPEP review taking place in approximately four years.

## 1.0 INTRODUCTION

The Alabama Agreement State Program (Alabama) review was conducted from May 22-26, 2023, by a team of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the Commonwealth of Massachusetts. Team members are identified in Appendix A. In-person inspector accompaniments were conducted during the week of April 24, 2023. The inspector accompaniments are identified in Appendix B. The review was conducted in accordance with the "Agreement State Program Policy Statement," published in the *Federal Register* on October 18, 2017 (82 FR 48535), and NRC Management Directive (MD) 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)," dated July 24, 2019. Preliminary results of the review, which covered the period of May 25, 2019, to May 26, 2023, were discussed with Alabama management 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 Alabama on March 6, 2023. Alabama provided its response to the questionnaire on May 18, 2023. A copy of the questionnaire response is available in the NRC's Agencywide Documents Access and Management System (ADAMS) Accession Number [ML23139A252](#).

Alabama is administered by the Office of Radiation Control (Office) which is in the Alabama Department of Public Health (Department). Organization charts for Alabama are available in ADAMS [ML23139A251](#).

At the time of the review, Alabama regulated 321 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, as an Agreement between the NRC and the State of Alabama.

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

## 2.0 PREVIOUS IMPEP REVIEW AND STATUS OF RECOMMENDATIONS

The previous IMPEP review concluded on May 24, 2019. The final report is available in ADAMS [ML19224A666](#). The results of the review and the status of the associated recommendation are as follows:

Technical Staffing and Training: Satisfactory  
Recommendation: None

Status of the Materials Inspection Program: Satisfactory  
Recommendation: None

Technical Quality of Inspections: Satisfactory

Recommendation: The team recommended that Alabama assess its industrial radiography inspection program with respect to temporary job sites to determine whether any changes were warranted.

Status: The team found that Alabama performed an assessment of its industrial radiography inspection program. As a result of its assessment, Alabama revised inspection procedures to emphasize the importance of conducting temporary job site inspections and trained its staff on these procedures. The team found that as a result of these revisions and subsequent staff training, Alabama inspectors consistently prioritize the conduct of temporary job sites inspections, including making every reasonable attempt to complete them while supervisors are conducting inspection accompaniments. As a result, Alabama has performed at least 25 temporary job site inspections of its specifically licensed industrial radiography licensees during the review period, more than double performed during the previous review period.

The team recommends closing this recommendation.

Technical Quality of Licensing Actions: Satisfactory  
Recommendation: None

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

Compatibility Requirements (now known as 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 sufficient number of experienced, knowledgeable, well-trained technical personnel. Under certain conditions, staff turnover could have an adverse effect on the implementation of these programs and could affect public health and safety. Apparent trends in staffing must be assessed. Review of staffing also requires consideration and evaluation of the levels of training and qualification. The evaluation standard measures the overall quality of training available to, and taken by, materials program personnel.

##### a. Scope

The team used the guidance in State Agreements (SA) procedure [SA-103](#), "Reviewing the Common Performance Indicator: Technical Staffing and Training," and evaluated Alabama'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

Alabama is composed of 10 staff members, which equals 6.5 full-time equivalent (FTE) for the radiation control program when fully staffed. This includes 5.5 FTE for technical work and 1.0 FTE for administrative work. During the review period, seven staff members left the program and five staff members were hired, which included filling a position that was vacant at the time of the previous IMPEP review. The positions were vacant from 1 to 21 months. The position vacant for 21 months, a Radiation Physicist in Radioactive Materials Compliance (i.e., inspection), was vacant at the time of the last IMPEP review and was subsequently filled in October 2020. All other positions were vacant from one to six months.

Currently, there are three vacancies: a Radiation Physicist in Radioactive Materials Compliance, a Senior Radiation Physicist in Licensing and Registration, and the Director of Radioactive Materials Compliance. Alabama posted the Director of Radioactive Materials Compliance position after it became vacant in December 2022, but did not identify an acceptable candidate. The position description is being rewritten in order to attract additional candidates. The team noted that the Office Director is directly overseeing compliance staff until this vacancy is filled. The open staff positions in licensing and compliance are open under a continuous vacancy announcement. Program management periodically checks these vacancies for qualified candidates. None were identified during the last review. Program management plans to check for new applicants in the coming months.

The team evaluated Alabama's training and qualification program. The team determined that Alabama has a training and qualification program compatible with the NRC's [IMC 1248](#). The team also found that all qualified license reviewers and inspectors maintained 24 hours of refresher training every 24 months for the duration of the review period.

No impacts related to the pandemic were noted in this indicator.

c. Evaluation

The team determined that, during the review period, Alabama met the performance indicator objectives listed in Section 3.1.a. The team noted that 3 of 10 positions, which could be considered “more than a few,” were vacant at time of review, and a performance issue regarding timely issuance of inspection findings was noted in Status of the Materials Inspection Program. As a result, the team discussed whether a rating of satisfactory or a rating of satisfactory but needs improvement was more appropriate this indicator. Specifically, the team noted that MD 5.6 states in Section III.B.2 that “consideration should be given to a finding of satisfactory but needs improvement when a review demonstrates the presence of one or more of the following conditions” including:

- (a) Insufficient qualified staff to implement the regulatory program and/or vacant positions not readily filled, that result in performance issues in one other indicator.

However, the team determined that Alabama did not meet this condition during the review period because the performance issue was not the result of Alabama’s staffing strategy or its implementation, but rather the Office Director’s prioritization and management of an unusually high workload during a short period between March and May 2023. Moreover, the team noted that Alabama shifted effort to radioactive materials compliance and licensing, deferring work on industrial accelerator and x-ray machine compliance and registration. This shift minimized the impact of current staff vacancies on program performance to date.

Therefore, based on the IMPEP evaluation criteria in MD 5.6, the team recommends that Alabama’s performance with respect to the indicator, Technical Staffing and Training, be found satisfactory.

d. MRB 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 Alabama’s performance with respect to the following performance indicator objectives:

- Initial inspections and inspections of Priority 1, 2, and 3 licensees are performed at the prescribed frequencies (<https://www.nrc.gov/materials/miau/mat-toolkits.html>).
- Deviations from inspection schedules are normally coordinated between technical staff and management.
- There is a plan to perform any overdue inspections and reschedule any missed or deferred inspections or a basis has been established for not performing any overdue inspections or rescheduling any missed or deferred inspections.
- Candidate licensees working under reciprocity are inspected in accordance with the criteria prescribed in [IMC 2800](#) and other applicable guidance or compatible Agreement State Procedure.
- Inspection findings are communicated to licensees in a timely manner (30 calendar days, or 45 days for a team inspection), as specified in [IMC 0610](#), "Nuclear Material Safety and Safeguards Inspection Reports."

b. Discussion

Alabama performed 240 Priority 1, 2, 3, and initial inspections during the review period. Of the 217 Priority 1, 2, and 3 inspections conducted during the review period, eight were performed overdue during the review period and four were overdue at the time of the review. Of the 23 initial inspections, one was performed overdue during the review period and seven were overdue at the time of the review. The team determined that Alabama conducted 8 percent of Priority 1, 2, 3, and initial inspections overdue.

The team noted that 17 of the 20 total overdue initial and routine inspections were associated with out-of-state licensees that maintained specific licenses with Alabama in case they conduct work for longer than 30 days in Alabama (the limit on reciprocity-based work). Alabama inspectors are not authorized to travel outside of the state for inspections, so they can only complete inspections of these licensees at temporary job sites within the state. However, these licensees did not conduct work in the state during their inspection window. Licensees are required by license condition to notify Alabama prior to conducting work in the state. However, this prior notification does not always provide sufficient notification for an inspector to get to the site while licensed activities are being conducted. The team discussed alternative strategies with Alabama for performing initial or routine inspections of these licensees, such as remotely interviewing staff, examining equipment, and reviewing records related to activities conducted in the state.

Alabama's inspection frequencies are the same or more frequent for similar license types in NRC's program. A sampling of all inspection reports since 2020 indicated that three inspection findings of non-compliance were issued to licensees beyond Alabama's goal of 30 days after the inspection exit or 45 days after the team inspection exit. These findings were issued between 15 days and 43 days after the 30-day goal. While the final findings were issued late, Alabama still verbally communicated the preliminary findings and the need for timely corrective actions to the licensees at the conclusion of each onsite inspection. The team noted that all three examples were related to inspections performed in February and March 2023, and corresponded with a short period of unusually high workload for the Office Director between March and May 2023. No inspection reports with findings were beyond the 30-day goal at the time of the review.

Prior to May 2020, Alabama Office Policy 202 set a goal of inspecting 10 percent of all Priority 1, 2, and 3 reciprocity licensees. In May 2020, following recent revisions to the NRC's [IMC 2800](#), Alabama revised this Policy to establish a goal of inspecting 10 percent of all reciprocity licensees determined to be candidates based on risk and performance insights. This revision was communicated to Agreement States via State and Tribal Communications Letter 20-082, which stated that "[t]he IMPEP review team should evaluate the Agreement State's reciprocity inspection program for the entire review period based on the procedure implemented with the least restrictive criteria." The team reviewed both reciprocity procedures and determined that since Alabama had not documented which reciprocity licensees it determined to be candidates based on risk and performance insights, the former procedure was the less restrictive, as fewer inspections were needed to achieve the goal. Therefore, the team used the former guidance for calculating the percentage of inspections performed during the review period.

Alabama performed 8 percent of candidate reciprocity inspections in 2019, 7 percent in 2020, 33 percent in 2021, and 21 percent in 2022. The team noted that Alabama's performance in 2020 was impacted by the pandemic. At the onset of the pandemic in March 2020, Alabama put all inspections on hold for 6 weeks. From then until the end of 2020, Alabama's only fully qualified inspector was also redirected to perform other public health duties not related to those in the radiation control program for approximately 20 percent of their time. In response to this temporary redirection of inspection resources, Alabama deprioritized reciprocity inspections to focus inspection resources on scheduled inspections and incident response. No performance impacts in these areas were noted as a result.

The team noted that [Temporary Instruction \(TI\) 003](#), "Evaluating the Impacts of the COVID19 Public Health Emergency as part of the Integrated Materials Performance Evaluation Program (IMPEP)," states, in part, that in situations where candidate licensees working under reciprocity are inspected in a manner that differs with the criteria prescribed in IMC 2800 and other applicable guidance or compatible Agreement State Procedure, and these situations are outside the Program's control, they should not be considered by the IMPEP team while establishing the overall indicator rating, provided that Alabama continues to maintain health, safety, and security. The team found that Alabama inspected reciprocity licensees in a manner that differed with the criteria in its established policy because of the temporary redirection of inspection resources due to the pandemic. Therefore, reciprocity inspections in 2020 were not considered by the IMPEP team while establishing the overall indicator rating.

c. Evaluation

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

- Candidate licensees working under reciprocity in 2019 were not inspected in accordance with the criteria prescribed in IMC 2800 and other applicable guidance or compatible Agreement State Procedure.
- Three inspection findings were not 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."

In 2019, Alabama inspected less than 10 percent of all Priority 1, 2, and 3, reciprocity licensees. The team also noted that Alabama continued to maintain its focus throughout the review period on inspecting industrial radiography licensees at temporary job sites (see Section 3.3) and substantially exceeded its goal for reciprocity inspections in 2021 and 2022.

During the review period, Alabama issued three inspection reports with findings to licensees more than 30 days after the inspection. The team determined that these did not represent more than a few of the more than 150 reports reviewed for timeliness and were limited to a short period of unusually high workload for the Office Director. In addition, preliminary findings and the need for timely corrective actions had already been communicated to the licensees involved.

Based on these findings, the team discussed ratings of satisfactory and satisfactory but needs improvement for this indicator. Specifically, the team noted that MD 5.6 states in Section III.C.2 that “consideration should be given to a finding of satisfactory but needs improvement when a review demonstrates the presence of one or more of the following conditions” including:

- (b) Inspection findings of non-compliance are not issued to the licensee according to the criteria specified in NMSS procedure [SA-101](#) or compatible Agreement State procedure in more than a few, but less than most, of the cases reviewed.

However, the team determined that, as discussed above, Alabama did not meet this condition during the review period because not more than a few reports were issued late. Therefore, based on the IMPEP evaluation criteria in MD 5.6, the team recommends that Alabama’s performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

d. MRB Chair’s Determination

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

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 [SA-102](#), “Reviewing the Common Performance Indicator: Technical Quality of Inspections,” and evaluated Alabama’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 21 inspection reports and enforcement documentation, and interviewed inspectors involved in materials inspections conducted during the review period. The team reviewed casework for inspections conducted by all current and former staff who were qualified to perform inspections during the review period, and covered medical, industrial, commercial, academic, research, and service licenses.

In 2019 the team recommended that Alabama assess its industrial radiography inspection program with respect to temporary job sites to determine whether any changes were warranted to better assess the performance of industrial radiography licensees. During this review, the team found that Alabama performed an assessment of its industrial radiography inspection program. As a result of its assessment, Alabama revised inspection procedures to emphasize the importance of conducting temporary job site inspections and trained its staff on these procedures. The team found that as a result of these revisions and subsequent staff training, Alabama inspectors regularly prioritized the conduct of temporary job sites inspections including make every reasonable attempt to complete them during the inspection accompaniments. Alabama has performed at least 25 temporary job site inspections of its specifically licensed industrial radiography licensees during the review period, more than double performed during the previous review period.

A team member accompanied two inspectors on April 25-28, 2023. The inspector accompaniments are identified in Appendix B. The inspectors were well-prepared and thorough, assessed the impact of licensed activities on health, safety, and security, and followed documented inspection procedures. No performance issues were noted during the inspector accompaniments.

The team noted that Alabama maintained sufficient instrumentation for inspectors to conduct independent or confirmatory measurements that were calibrated at appropriate intervals and were appropriate for the types of licensed activities inspected. Supervisory accompaniments for each materials inspector were performed in each year of the review period.

No impacts related to the pandemic were noted in this indicator.

c. Evaluation

The team determined that, during the review period, Alabama met the performance indicator objectives listed in Section 3.3.a. Based on the criteria in MD 5.6, the team recommends that Alabama's performance with respect to the indicator, Technical Quality of Inspections be found satisfactory.

d. MRB Chair's Determination

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

3.4 Technical Quality of Licensing Actions

The quality, thoroughness, and timeliness of licensing actions can have a direct bearing on public health and safety, as well as security. An assessment of licensing procedures, implementation of those procedures, and documentation of communications and associated actions between the Alabama 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 Alabama's performance with respect to the following performance indicator objectives:

- Licensing action reviews are thorough, complete, consistent, and of acceptable technical quality with health, safety, and security issues properly addressed.
- Essential elements of license applications have been submitted and elements are consistent with current regulatory guidance (e.g., pre-licensing guidance, Title 10 *Code of Federal Regulation* (CFR) Part 37, financial assurance, etc.).
- License reviewers, if applicable, have the proper signature authority for the cases they review independently.
- License conditions are stated clearly and can be inspected.
- Deficiency letters clearly state regulatory positions and are used at the proper time.
- Reviews of renewal applications demonstrate a thorough analysis of a licensee's inspection and enforcement history.
- Applicable guidance documents are available to reviewers and are followed (e.g., NUREG-1556 series, pre-licensing guidance, regulatory guides, etc.).
- Licensing practices for risk-significant radioactive materials are appropriately implemented including the physical protection of Category 1 and Category 2 quantities of radioactive material (10 CFR Part 37 equivalent).
- Documents containing sensitive security information are properly marked, handled, controlled, and secured.

b. Discussion

During the review period, Alabama performed 1,348 radioactive materials licensing actions. The team evaluated 22 of those licensing actions. The licensing actions selected for review included three new applications, 13 amendments, three renewals, and three terminations. The team evaluated casework that included the following license

types: medical diagnostic and therapeutic, industrial radiography, nuclear pharmacy, portable gauge, service provider, nuclear laundry, financial assurance, and transfers of control. At the time of the review there was no backlog of licensing actions. The casework sample represented work completed by all current and former staff who were qualified to independently perform licensing actions during the review period.

Licensing actions generally were well documented and addressed health, safety, and security issues. Renewal applications demonstrated a thorough analysis of the licensee's inspection and enforcement history. All necessary licensee commitments were obtained, and deficiency letters and license conditions were well supported by information contained in the licensing files. The team determined that appropriate financial assurance instruments were properly submitted when required, and that licenses containing security related information were properly marked. Each completed action includes a peer review and a final supervisory review. All final actions are signed by either the Radiation Control Program Director or the licensing supervisor, as well as by the Alabama State Health Officer. All licenses are issued with a 5-year expiration date.

The team assessed the implementation of 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 Alabama had not implemented pre-licensing guidance checklists compatible with those used by the NRC. The team found that Office Policy 267 requires a pre-licensing site visit be performed for all new license applications. This process is more restrictive for new license applications than the NRC's process. However, this process did not apply to transfers of control, to which the NRC's Pre-Licensing Guidance also applies. The team discussed proper use of the pre-licensing guidance with program management during the on-site review. Program management immediately updated Office Policy 267 and incorporated the most recent version of the NRC's Pre-Licensing Guidance as Appendix C. Program management communicated the updates to staff and committed to apply the guidance and completing the checklists for all new licensees and transfers of control received.

The team evaluated Alabama's use of the Risk Significant Radioactive Materials Checklist (RSRM). The team determined that Alabama adopted and properly implemented the most current version of the RSRM checklist during the review period.

No impacts related to the pandemic were noted in this indicator.

c. Evaluation

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

- The most current version of NRC's "Checklist to Provide a Basis for Confidence that Radioactive Material will be used as Specified on the License" (Pre-Licensing Guidance) was not being implemented for transfer of control applications.

During the review period, Alabama had a policy in place that required a pre-licensing site visit for all new license applicants. This process is more restrictive than the NRC's process for new license applicants. However, while Alabama was implementing a process equivalent to NRC guidance for new license applications, the team determined

that it was not implementing an equivalent process for transfer of control amendments. Of the three transfer of control licensing actions reviewed by the IMPEP team, all were mergers or acquisitions of companies by entities known to the Alabama radiation control program and, as such, would not have required a pre-licensing site visit. Therefore, there was no safety or security impact of Alabama's less restrictive procedure for the actions to which it was applied during the review period. The team discussed the proper use of the NRC's pre-licensing guidance with management during the on-site review. Alabama management took immediate action to correct the situation and to fully adopt the NRC's pre-licensing guidance once notified of the finding. Staff were also informed of the update to the Policy and instructed to apply Appendix C to all new license applications and transfers of control received in future.

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

d. MRB Chair's Determination

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

3.5 Technical Quality of Incident and Allegation Activities

The quality, thoroughness, and timeliness of response to incidents and allegations of safety concerns can have a direct bearing on public health, safety and security. An assessment of incident response and allegation investigation procedures, actual implementation of these procedures internal and external coordination, timely incident reporting, and investigative and follow-up actions, are a significant indicator of the overall quality of the incident response and allegation programs.

a. Scope

The team used the guidance in [SA-105](#), "Reviewing the Common Performance Indicator: Technical Quality of Incident and Allegation Activities," and evaluated Alabama'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, 35 reportable incidents were reported to Alabama. The team evaluated 14 radioactive materials incidents, which included 3 events involving lost, stolen, or abandoned radioactive materials, 4 medical events, and 7 events involving damaged equipment or failures. Alabama dispatched inspectors for on-site follow-up for six of the cases reviewed.

When notified of an incident, management determines the appropriate level of response, which ranges from an immediate response to an in-office review or follow-up during the next routine inspection. Those determinations are made based on both the circumstances and the health and safety significance of the incident. The team found that Alabama's evaluation of incident notifications and its response to those incidents was thorough, well balanced, complete, and comprehensive.

The team also evaluated the Alabama's reporting of incidents to the NRC's Headquarters Operations Officer (HOO). The team noted that in each case requiring HOO notification, Alabama reported the incidents in a timely fashion. The team also evaluated whether Alabama had failed to report any required incidents to the HOO and did not identify any missed reporting requirements. The team noted while Alabama was timely in responding to and closing events internally, there were seven events considered closed by Alabama that that were still open in NMED. NRC procedure [SA-300](#), "Reporting Materials Events," does not prescribe a time frame to provide updates or to close an event in NMED; however, Alabama has not yet provided a time frame on closing these events. The team attributed this to incomplete turnover within program management. The team discussed methods for closing NMED items with program management during the on-site review.

During the review period, five allegations were received by Alabama, including one allegation that the NRC referred to the State, during the review period. The team evaluated all allegations. The protection of an allegor's identity was consistent with the NRC's allegation program. Overall Alabama followed its process outlined in Office Policy 256, however, the team identified one instance where Alabama did not document an allegation received via email on their allegation intake form.

No impacts related to the pandemic were noted in this indicator.

c. Evaluation

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

- Incidents are reported to the Nuclear Material Events Database (NMED) and closed when all required information has been obtained.

During the review period, 35 reportable incidents were reported to Alabama, and all were reported on to NRC in a timely manner. However, seven were still open in NMED at the time of the review, despite having already been considered closed internally by Alabama. The team discussed methods for closing NMED items with program management during the on-site review. Alabama has not yet provided a time by which it plans to formally close these events. However, the team viewed closure as an

administrative step and did not consider a finding other than satisfactory for this indicator.

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

d. MRB Chair's Determination

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

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 Program. The NRC retains regulatory authority for LLRW Disposal and Uranium Recovery; therefore, only the first two non-common performance indicators 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 NRC Web site at the following address: <https://scp.nrc.gov/regtoolbox.html>.

a. Scope

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

- The Agreement State program does not create conflicts, duplications, gaps, or other conditions that jeopardize an orderly pattern in the regulation of radioactive materials under the Atomic Energy Act, 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

Alabama became an Agreement State on October 1, 1966. The Alabama Agreement State Program's current effective statutory authority is contained in the Acts of 1963, No. 582 of the Alabama Statutes. The Department is designated as the State's radiation control agency. No legislation affecting the radiation control program was passed during the review period.

Alabama's administrative rulemaking process currently takes 6-8 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 State Committee of Public Health. The team noted that the State's rules and regulations are not subject to "sunset" laws.

During the review period, Alabama submitted eight proposed regulation amendments, nine final regulation amendments, and no legally binding requirements or license conditions to the NRC for a compatibility review. One amendment was overdue for adoption at the time of submission. This amendment (RATS ID 2019-2) was for organizational changes and conforming amendments; because Alabama had already incorporated the NRC's requirements by reference, no changes were needed.

At the time of this review, no amendments were overdue for adoption.

No impacts related to the pandemic were noted in this indicator.

c. Evaluation

The team determined that, during the review period, Alabama met the performance indicator objectives listed in Section 4.1.a. Based on the criteria in MD 5.6, the team recommends that Alabama's performance with respect to the indicator, Legislation, Regulations, and Other Program Elements, be found satisfactory.

d. MRB Chair's Determination

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

#### 4.2 SS&D Evaluation Program

Although Alabama has authority to conduct SS&D evaluations for byproduct, source, and certain special nuclear materials, the Office did not conduct any SS&D evaluations during the review period, nor did the Office have any pending applications for an SS&D evaluation. Accordingly, the team did not review this indicator.

#### 5.0 SUMMARY

The team found Alabama's performance satisfactory for all performance indicators reviewed.

The team determined that the recommendation from the 2019 IMPEP review should be closed and did not make any recommendations.

Accordingly, the team recommends that Alabama be found adequate to protect public health and safety and compatible with the NRC's program. Based on the results of this IMPEP review, and in consideration of the discussions for satisfactory but needs improvement related to recent trends in two indicators, the team recommends that the next full IMPEP review take place in approximately four years, with a periodic meeting in approximately two years.

## LIST OF APPENDICES

Appendix A	IMPEP Review Team Members
Appendix B	Inspector Accompaniments

## APPENDIX A

### IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Areas of Responsibility</b>
Ryan Craffey, NRC Region III	Team Leader Legislation, Regulations and Other Program Elements Inspector Accompaniments
Monica Ford, NRC Region I	Technical Quality of Licensing Actions
Allyce Bolger, NRC NMSS	Technical Quality of Incident and Allegation Activities
Joshua Daehler, Massachusetts	Technical Staffing and Training
Jason Draper, NRC Region III	Status of Materials Inspection Program Technical Quality of Inspections
Jade Adams, NRC NRAN	Team Member in Training
Trisha Gupta Sarma, NRC NRAN	Team Member in Training

APPENDIX B

INSPECTOR ACCOMPANIMENTS

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

Accompaniment No.: 1	License No.: 278
License Type: Medical Institution Written Directive Required	Priority: 3
Inspection Date: 04/25/23	Inspector: CD

Accompaniment No.: 2	License No.: 1550
License Type: Industrial Radiography	Priority: 1
Inspection Date: 04/26/23	Inspector: SW

Accompaniment No.: 3	License No.: 1562
License Type: Industrial Radiography	Priority: 1
Inspection Date: 04/27/23	Inspector's initials: CD

Accompaniment No.: 4	License No.: 1111
License Type: Radiopharmacy	Priority: 2
Inspection Date: 04/28/23	Inspector's initials: SW