



**Office of Nuclear Material Safety and Safeguards State
Procedure Approval**

***Reviewing the Common Performance Indicator,
Technical Staffing and Training***
Interim State Agreements (SA) Procedure SA-103

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NOTE

Any changes to the procedure will be the responsibility of the NMSS Procedure Contact. Copies of NMSS procedures are available through the NRC Web site at <https://scp.nrc.gov>



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I. INTRODUCTION

This document describes the objectives and procedure for conducting reviews of the U.S. Nuclear Regulatory Commission (NRC) and Agreement State radioactive materials programs using the common performance indicator, Technical Staffing and Training.

II. OBJECTIVES

- A. To confirm that staffing levels throughout the review period were sufficient to support radioactive materials licensing and inspection activities such that a backlog did not exist impacting the indicator(s) Status of Materials Inspection Program and/or Technical Quality of Licensing Actions.
- B. To determine the rate of staff turnover, especially senior-level positions, and the underlying causes and the length of time positions are vacant.
- C. To determine whether staffing issues are a chronic or a short-term issue.
- D. To determine the level of management commitment to training for initial staff qualification and continuing education.
- E. To evaluate whether the inspector and license reviewer training and qualification program is being implemented effectively and is compatible with the NRC's Inspection Manual chapter 1248.

III. BACKGROUND

The ability to conduct effective licensing, inspection, and incident and allegation response programs is largely dependent on having a sufficient number of experienced, knowledgeable, qualified, and well-trained technical personnel. For this performance indicator, review team members will determine the ability to recruit and retain qualified staff and maintain staffing levels sufficient for the number and types of licensees. In addition, the reviewer will conduct interviews with both staff and management and examine the training and qualification documentation to ensure that license reviewers and inspectors are properly trained and qualified for the type(s) of licensed programs for which they are given inspection and licensing authority.

IV. ROLES AND RESPONSIBILITIES

A. Team Leader:

In coordination with the IMPEP Program Manager, the Team Leader determines which team member is assigned lead review responsibility and also assigns other team members to provide support, as necessary. Communicates the team's findings to Program Management and ensures that the team's findings are in alignment with Management Directive (MD) 5.6, *Integrated Materials Performance Evaluation Program (IMPEP)*."

B. Principal Reviewer:

Reviews and evaluates the level of staffing and turnover and their impacts on the overall program, the training and qualification of new staff, and the continuing training of qualified staff against the criteria as established in the NRC's MD 5.6.

V. GUIDANCE

A. Scope

1. The team should follow the guidance provided in SA-100, *Implementation of the Integrated Materials Performance Evaluation Program (IMPEP)*, regarding discussions related to this indicator with inspectors, supervisors, and managers. If performance issues are identified by the reviewer(s) that lead to programmatic weaknesses, the reviewer(s) should seek to identify the root cause(s) of the issues which can be used as the basis for developing recommendations for corrective actions. As noted in Section II.A.3, SA-100 contains criteria regarding the development of recommendations by the IMPEP team.

In terms of general guidance for the IMPEP review team, a finding of

"satisfactory" should be considered when none or only a few or small number of the cases or areas reviewed involve performance issues/deficiencies (e.g., inspection, licensing, staffing, etc.); an "unsatisfactory" finding should be considered when a majority or a large number of cases or areas reviewed involve performance issues/deficiencies, especially if they are chronic, programmatic, and/or of high-risk significance; and a finding of "satisfactory, but needs improvement" should be considered when more than a few or a small number of the cases or areas reviewed involve performance issues/deficiencies in high-risk-significant regulatory areas, but not to such an extent that the finding would be considered unsatisfactory. This procedure applies only to technical and managerial personnel performing work that supports the Agreement State or NRC Program being reviewed.

2. If performance deficiencies are identified, the IMPEP team should consider whether the root causes of these deficiencies affect more than the Technical Staffing and Training Performance Indicator. Issues impacting one performance indicator could also have a negative impact on performance with respect to other indicators. As a general matter, a performance deficiency, and associated root causes, should be assigned to only the most appropriate indicator and not counted against multiple indicators.

B. Evaluation Process

The principal reviewer should refer to Part III, *Evaluation Criteria*, of MD 5.6, for specific evaluation criteria. As noted in Management Directive 5.6, the criteria for a satisfactory program is as follows:

1. There are sufficient qualified technical and administrative staff to implement the regulatory program with few, if any, staffing vacancies.
2. Management commitment to training is clear.
3. Staffing trends that could have an adverse impact on the quality of the program are tracked, analyzed, and addressed by program management.
4. The program has compatible training and qualification procedures in accordance with the criteria specified in IMC 1248.

5. Staff is completing the training and qualification requirements according to the timelines specified in IMC 1248 or compatible Agreement State requirement.
6. New staff members are hired with the scientific or technical backgrounds that would equip them to receive technical training.
7. The program's training and qualification standards meet personnel needs.

Appendix C contains examples to assist the IMPEP team in identifying circumstances that could warrant a finding of less than satisfactory for this indicator.

C. Review Guidelines

1. The principal reviewer should review the responses provided by the NRC or Agreement State Program to the questions in the IMPEP questionnaire. The reviewer can identify potential issues and generate questions to focus the review.
2. During the on-site review, training and qualification records and job descriptions should be reviewed and evaluated.
3. Staff members hired since the last IMPEP review are candidates for evaluation of the effectiveness of the program's training and qualification process.
4. Evaluate and document the following:
 - a. Number of full-time equivalent (FTE) staff dedicated to the radiation control program. (Include in the FTE both the number and type of full-time and part-time positions allocated to the program.)
 - b. Adequacy of the FTE to properly implement the regulatory program with a proper balance among FTE assigned to licensing, inspection, incident and allegation response, and regulation/guidance development activities.
 - c. Impact of vacancies during the review period.
 - d. Whether minimum qualification and training program requirements for personnel in the program are documented. (See Appendix A for a sample training program description.)

- e. Whether the status of each technical staff member's training and qualification record is complete and current.
- f. The reviewer should discuss their findings with the Team Leader in order to provide feedback to the Program.

D. Discussion of Findings Radiation Control Program

The IMPEP team should follow the guidance given in SA-100, *Implementation of the Integrated Materials Performance Evaluation Program (IMPEP)*, for discussion of technical findings with staff, supervisors, and management. If performance issues are identified that lead to programmatic weaknesses, the team should seek to identify the root cause(s) of the issues which can be used as the basis for developing recommendations for corrective actions.

VI. APPENDIXES

- A. Frequently Asked Questions
- B. Examples of less than Satisfactory Findings of a Program Performance from previous IMPEP reviews

VII. REFERENCES

1. Management Directives (MD) available at <https://scp.nrc.gov>.
2. NMSS SA Procedures available at <https://scp.nrc.gov>.

Appendix A

Frequently Asked Questions

Note: This is not an all-inclusive list but represents some commonly asked questions over the course of the IMPEP program. More examples will be maintained and updated in the IMPEP Toolbox on the state communications portal website.

Q1: What constitutes an acceptable written training and qualification program?

A: An acceptable written training and qualification program could consist of a policy statement, description of the basic essentials and training elements based on the types of State licensees, and a training qualification form for each individual. Additional information as to the details of the basic essentials and training elements for specialized training can be found in the IMC 1248.

Q2: Does the documented training program description need to be as extensive as NRC's IMC 1248?

A: No, the documented training program description does not need to be as extensive as NRC's IMC 1248.

Q3: Is it necessary to have a documented training and qualification program if the State has not hired any new staff in 10 years and the program manager states that all staff members are qualified?

A: No, it is not necessary to have a documented training and qualification program as described in this scenario. The documented training and qualification program is just one piece of information the team should use in determining the rating for this indicator. Handbook 5.6 indicates that the State should have established qualification criteria for hiring technical staff and should have additional training and experience requirements based on the types of licenses the program issues or inspects. As noted in this procedure, the team should review the documented training and qualification program description including qualification requirements for personnel in the program. Management approval of a staff member's qualification should be in writing. If there is no documented qualifications for staff (including management sign-off), the review team should make a recommendation that the State documents its training and qualification program.

If there is no documented training and qualification program, the review team should examine the overall performance of the State in conducting the program activities to determine if the lack of a documented training and qualifications program has impacted the program performance. Although the review team may not identify any performance issues because of the expertise of the current staff, establishing a documented basic program will provide the basis for continued performance by the Agreement State program in the future.

Q4: Is there a staffing formula for States to use? Does the NRC still recommend the 1.0-1.5 technical full-time equivalents (FTE) per 100 licenses?

A: No. Prior to the implementation of IMPEP, NRC used prescriptive indicators to evaluate Agreement State Programs, including the formula 1.0-1.5 technical FTE per 100 licenses for staffing levels. Use of this formula was discontinued because it did not adequately account for licensee complexity and was not a reliable indicator of performance. NRC does not recommend a specific staffing formula. Instead, NRC recommends that each program examine their individual workloads, types of licensees and licensing actions (numbers and complexity), and inspection activities necessary to protect public health and safety in order to determine necessary staffing levels. Additional staff efforts for regulation promulgation should be considered in the program's evaluation. Although there is no explicit criterion for new Agreement States in the 1981 Policy Statement on Discontinuance of NRC Regulatory Authority and Assumption by States; NMSS Procedure SA-700, *Processing an Agreement*, states that there must be at least two qualified technical staff in the program.

A State may find Appendix B of SA-700 helpful in evaluating staffing levels in their program. This is a worksheet traditionally used in the initial implementation of a new Agreement State program; however, the same worksheet may be used by an existing Agreement State program to evaluate the adequacy of the number of FTE in their program.

Q5: Does a State need more than one individual trained for a particular technical area or modality?

A: Although it is not necessary to have more than one individual trained for a particular technical area or modality, we believe it is prudent to have at least two individuals with expertise in each technical area or modality. For States with smaller numbers of licensees, the potential exists for the State to lose the capability to conduct certain aspects of their program with a single staff member's departure. For larger States, it will depend on the workload in a particular technical area or modality and whether it is more efficient and effective for the State to train several or all individuals for the particular technical area or modality under review.

Q6: If an individual has taken a specific training course, such as radiography, is that individual qualified to conduct radiography inspections?

A: Attendance at a given training course is not the sole requirement for competency in a given area, whether licensing or inspection. The State's training and qualification program should define what the State considers to be a demonstration of competency applicable to the licensing or inspection of a specific activity. In many cases, mentoring by more experienced staff or completion of a specific number of licensing actions or inspections with senior staff members may be part of the necessary training to establish competency. The Program Director or designee should approve, in writing, individual

staff qualifications.

Q7: If the State has hired a qualified nuclear medicine technologist as an inspector, does that individual need to take the nuclear medicine course to become qualified to conduct nuclear medicine inspections?

A: As noted above, attendance at a given training course is not the sole requirement for competency. In this situation, the State management may find the individual is qualified in the elements of the nuclear medicine programs, but as a new employee, needs additional training in the essentials of inspection techniques. Management may sign the individual's training documentation as complete for nuclear medicine based on the individual's previous work experience and after successfully completing training in inspection techniques. If the individual's work experience was limited to diagnostic nuclear medicine, additional training in therapeutic nuclear medicine and brachytherapy may be needed to be a fully qualified inspector for all medical applications.

Q8: Does a license reviewer or inspector need to be qualified in all areas, before they can perform work independently?

A: No. If a license reviewer or inspector has established competency in a given area, such as gauge licensing/inspection, the supervisor can approve independent work in that one area. The license reviewer/inspector may work independently while continuing to pursue competency in additional areas. NRC staff members are often referred to as having interim qualifications, which allows independent work in a limited area of demonstrated competency.

Q9: During difficult economic periods States may be forced to issue a freeze on funding for the hiring of program staff and travel expenses for staff training. What should the team member review and consider in determining whether the State's performance for this indicator is satisfactory?

A: The reviewer can determine whether the State's program for filling vacancies has been impacted by examining the results of the other indicators such as *Status of Materials Inspection Program*, *Technical Quality of Inspections* and *Technical Quality of Licensing Actions* to assess whether the number of overdue core (Priority 1, 2, and 3 and initial) inspections is satisfactory and whether inspection reports and licensing actions are being completed and issued within the required timeframe. For training sufficiency, in addition to examining training records, the reviewer should interview inspection and licensing staff to determine depth of knowledge. The reviewer should also consult with the team member(s) who performed inspection accompaniments to get feedback on the inspectors' performances. In any case, the State should have a plan in place to address this issue (e.g., providing in-house training, requesting to host NRC training, using managers or trained staff from another Division or Agreement State to perform inspections during these periods, etc.)

Q10: If a State uses a "train-the-trainer" approach to staff training to minimize staff time out of the office, what documentation should be available for the team to review?

A: A “train-the-trainer” approach, where one individual attends a training class and then presents the information to the staff in an in-house training session, is perfectly acceptable given the restrictions on out-of-State travel that some States are facing. If a State chooses to use a “train-the-trainer” approach, the State should document the date(s) that the in-house training was offered and retain a summary of the scope and objectives of the training or a copy of the agenda. The effectiveness of the training will be evaluated through the review of quality of casework and interviews with staff.

Appendix B

Examples That Could Lead a Team to Find the Indicator Technical Staffing and Training Less than Satisfactory

NOTES:

- The effectiveness of a program is assessed through the evaluation of the criteria listed in Section III, Evaluation Criteria, of MD 5.6. These criteria are NOT intended to be exhaustive but provide a starting point for the IMPEP review team to evaluate this indicator. The review team should also take into consideration other relevant mitigating factors that may have an impact on the program's performance under this performance indicator. The review team should consider a less than satisfactory finding when the identified performance issue(s) is/are programmatic in nature, and not isolated to one aspect, case, individual, etc. as applicable.
 - This list is not all inclusive and will be maintained and updated in the IMPEP Toolbox on the state communications portal website.
- A. 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.
1. Staff/ managerial vacancies go unfilled for extended periods of time impacting other IMPEP indicators such that one or more indicators could be downgraded to a satisfactory but needs improvement solely because of the lack of staff. Example: The team finds that greater than 10% but less than 25% of inspections were completed overdue under the indicator Status of Materials Inspection Program and determines the root cause to be lack of staff due to vacant positions going unfilled (i.e. not because of managerial oversight, etc.)
 2. The Inspector and/or License Reviewer training and qualification manual is not equivalent to the NRC's Inspection Manual Chapter 1248. Example: If the lack of an equivalent training and qualification manual is the root cause of a finding of satisfactory but needs improvement in the indicator(s) Technical Quality of Inspections and/or Technical Quality of Licensing Actions (i.e. the errors seen are directly related to how the individual was trained (a programmatic issue vs an individual issue)) the team should consider whether or not a more appropriate finding would be satisfactory but needs improvement under the indicator Technical Staffing and Training.

- B. Consideration should be given to a finding of “unsatisfactory” when a review demonstrates the presence of significant performance issues with respect to the other indicators that are determined to be related to one or more of the following conditions.
1. Staff/ managerial vacancies go unfilled for extended periods of time impacting other IMPEP indicators such that one or more indicators could be downgraded to unsatisfactory solely because of the lack of staff.
Example: The team finds that greater than 25% of inspections were completed overdue under the indicator Status of Materials Inspection Program and determines the root cause to be lack of staff due to vacant positions going unfilled (i.e. not because of managerial oversight, etc.)
 2. The Inspector and/or License Reviewer training and qualification manual is not equivalent to the NRC’s Inspection Manual Chapter 1248.
Example: If the lack of an equivalent training and qualification manual is the root cause of a finding of unsatisfactory in the indicator(s) Technical Quality of Inspections and/or Technical Quality of Licensing Actions (i.e. the errors seen are directly related to how the individual was trained (a programmatic issue vs an individual issue)) the team should consider whether or not a more appropriate finding would be unsatisfactory under the indicator Technical Staffing and Training.