



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

***Reviewing the Common Performance Indicator,
Technical Staffing and Training
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>

I. INTRODUCTION

This document describes the objectives and procedure for conducting reviews of the Agreement State and U.S. Nuclear Regulatory Commission (NRC) radiation control programs (Program) under the common performance indicator, Technical Staffing and Training and specified in the U.S. Nuclear Regulatory Commission (NRC) Management Directive (MD) 5.6, *Integrated Materials Performance Evaluation Program (IMPEP)*.

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) (i.e., Status of Materials Inspection Program, Technical Quality of Inspections, Technical Quality of Licensing Actions, and/or Technical Quality of Incident and Allegation Activities).
- 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 short-term or long-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 (IMC) 1248, *Formal Qualifications Program for Federal and State Material and Environmental Management Programs*.

III. BACKGROUND

The ability to update regulations and to conduct effective licensing, inspection, and incident and allegation response activities is largely dependent on having a sufficient number of experienced, knowledgeable, qualified, and well-trained technical staff. A well balanced and staffed radiation control program ensures protection of public health, safety, security, and the environment from the hazards associated with radioactive material.

IV. ROLES AND RESPONSIBILITIES

- A. IMPEP Review Team Leader (Team Leader)
 - 1. In coordination with the IMPEP Program Manager, the Team Leader determines which team member is assigned lead review responsibility and assigns other team members to provide support, as necessary.
 - 2. Communicates the team's findings to Program Management and ensures that the team's findings are in alignment with MD 5.6.
- B. Principal Reviewer
 - 1. 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 MD 5.6.

2. Informs the Team Leader of the team's findings throughout the on-site review.
3. Presents the team's findings to the Program at the staff exit meeting.
4. Completes their portion of the IMPEP report for the Technical Staffing and Training performance indicator reviewed.
5. Participates in the Management Review Board meeting for the IMPEP review; presents and discusses the team's findings for the Technical Staffing and Training performance indicator (this can be done either in person or remotely).

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. SA-100 contains criteria regarding the development of recommendations by the team. This procedure applies only to staff performing work that supports the Agreement State or NRC radiation control program being reviewed.
2. If performance deficiencies are identified, the 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. Review Guidelines

The Principal Reviewer should:

1. Evaluate the response generated by the Program to relevant questions in the IMPEP questionnaire. Depending on the level of detail of the information provided, the response to the questionnaire relative to this indicator may be useful to focus the review. The reviewer can identify potential issues (e.g., backlog in licensing, inspection, incident response, or allegation activities) and generate questions to focus the review.
2. Review and evaluate, the training and qualification records and job descriptions during the on-site review.
3. Determine the ability to recruit and retain qualified staff and maintain staffing levels sufficient for the number and types of licensees. This includes a review of staff turnover and the length of time to fill vacancies.

4. Evaluate the effectiveness of the program's training and qualification process for staff members hired since the last IMPEP review. The Principal Reviewer is encouraged to interview these new staff members.
5. 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 licensing and inspection authority.
6. Evaluate and document the following:
 - a. Number of full-time equivalent (FTE) staff dedicated to the radiation control program. The FTE should include both the number and type of full-time and part-time positions allocated to the program.
 - b. Adequacy of the FTE staff to properly implement the radiation control program with a proper balance among FTE assigned to licensing, inspection, incident and allegation response, regulation, and guidance development activities.
 - c. Impact of vacancies during the review period.
 - d. Whether minimum qualification and training program requirements for staff in the program are documented.
 - e. Whether the status of each technical staff member's training and qualification record is complete and current. This includes the required refresher training to maintain inspector qualification.
 - f. Any findings should be discussed with the Team Leader in order to provide feedback to the Program.

C. Review Details

1. The following scenarios are meant to assist the reviewer in their review of this indicator:
 - a. An acceptable written training and qualification program could consist of a policy statement, description of the basic essential and training elements to become a qualified materials inspector or license reviewer based on the types of licensees regulated by the radiation control program, and a training qualification form for each staff. Additional information as to the details of the basic essential and training elements for specialized training can be found in the Inspection Manual Chapter (IMC) 1248, *Formal Qualifications Program for Federal and State Material and Environmental Management Programs*.
 - b. The documented training program description does not need to be as extensive as NRC's IMC 1248. The essential objective of the training plan should be a pathway for staff to become qualified as a materials inspector, a license reviewer, or both.

- c. If the Program has not hired any new staff in 10 years and the program manager states that all staff are qualified, it is not necessary to have a documented training and qualification program. The documented training and qualification program is one piece of information the IMPEP Team should use in determining the rating for this indicator. Management Directive 5.6 indicates that the Program 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 staff in the program.
- d. If there is no documented training and qualification program, the IMPEP team should examine the overall performance of the Program in conducting the program activities to determine if the lack of a documented training and qualifications program has impacted the program performance. Although the team may not identify any performance issues because of the expertise of the current staff, at some point in the life cycle of the Program, it will become necessary to bring on new professionals. It is at that point that a documented training and qualifications program will help to assure that the Program is staffed with well-qualified staff that provide adequate protection of the public's health, safety, and security related to radioactive materials.
- e. Management approval of a staff member's qualification should be in writing. If there are no documented qualifications for staff (including management sign-off), the team should make a recommendation that the Program documents its training and qualification program.
- f. Prior to the implementation of IMPEP, the NRC used prescriptive indicators to evaluate radiation control 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. The NRC does not recommend a specific staffing formula. Instead, the NRC recommends that each program examine their staff 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. *The Handbook for Processing an Agreement* dated January 26, 2015, Section 6 states that there must be at least two qualified technical staff in the Program. A Program may find the *Staffing Analysis Form* located in Appendix B of the *Handbook for Processing an Agreement* (formerly in SA-700) helpful in evaluating staffing levels in their Program. The Handbook is available in the IMPEP toolbox on the state communications portal Web site. This is a worksheet traditionally used in the initial implementation of a new Program; however, the same worksheet may be used by an existing Program to evaluate the adequacy of the number of FTE in their program.

- g. Although it is not necessary to have more than one staff trained for a particular technical area or modality, it is prudent to have at least two staff with expertise in each technical area or modality. For Programs with smaller numbers of licensees, the potential exists for the Program to lose the capability to conduct certain aspects of their program with a single staff member's departure. For larger Programs it will depend on the workload in a particular technical area or modality and whether it is more efficient and effective for the Program to train several or all staff for the particular technical area or modality under review.
- h. Attendance at a given training course is not the sole requirement for competency in a given area, whether licensing or inspection. The Program's training and qualification program should define what the Program 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, staff qualifications.
- i. The Program management may find the staff with previous nuclear medicine experience is qualified in the elements of the nuclear medicine programs, but as a new employee, this staff will need additional training in the essentials of inspection techniques. Management may sign the staff's training documentation as complete for nuclear medicine based on the staff's previous work experience and after successfully completing training in inspection techniques. If the staff'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.
- j. If staff has established competency in a given area, such as portable and fixed gauge activities, the supervisor can approve independent work in that one area. The staff may work independently while continuing to pursue competency in additional areas. The NRC refers to those staff members as having interim qualifications, which allows independent work in a limited area of demonstrated competency.
- k. During difficult economic periods Programs may be forced to issue a freeze on funding for the hiring of program staff and travel expenses for staff training. The reviewer can determine whether the implementation of the Program's plan 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 high priority (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

- l. accompaniments to get feedback on the inspectors' performances. In any case, the Program 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 Agreement State to perform inspections during these periods, etc.).
- m. A "train-the-trainer" approach, where one staff attends a training class and then presents the information to the staff by way of an in-house training session, is acceptable given the restrictions on out-of-State travel that some Programs may face. If a Program chooses to use a "train-the-trainer" approach, the Program 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.

D. Evaluation Process

1. The Principal Reviewer should refer to Part III, *Evaluation Criteria*, of MD 5.6, for specific evaluation criteria. As noted in MD 5.6, the criteria for a satisfactory program are as follows:
 - a. There are sufficient qualified technical and administrative staff to implement the regulatory program with few, if any, staffing vacancies.
 - b. Management commitment to training is clear.
 - c. Staffing trends that could have an adverse impact on the quality of the program are tracked, analyzed, and addressed by program management.
 - d. The program has compatible training and qualification procedures in accordance with the criteria specified in IMC 1248.
 - e. Staff is completing the training and qualification requirements according to the timelines specified in IMC 1248 or compatible Agreement State requirement.
 - f. New staff members are hired with the scientific or technical backgrounds that would equip them to receive technical training.
 - g. The program's training and qualification standards meet personnel needs.

Note: *Examples of Less than Satisfactory Findings of Program Performance* can be found in the IMPEP Toolbox on the state communications portal Web site. These examples may assist the reviewer in identifying less than fully satisfactory findings of a Program's performance.

E. Discussion of Findings with the Radiation Control Program

1. The reviewer should follow the guidance given in NMSS Procedure SA-100, *Implementation of the Integrated Materials Performance Evaluation Program (IMPEP)*, for discussing technical findings with staff, supervisors, and management.

2. If the IMPEP review team identifies programmatic performance issues, the IMPEP review 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. The NMSS procedure SA-100 contains criteria regarding the development of recommendations by the IMPEP team.

VI. REFERENCES

Management Directives (MD) available at <https://scp.nrc.gov>.

NMSS SA Procedures available at <https://scp.nrc.gov>.

NRC Inspection Manual Chapters available at <https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/>.

VII. ADAMS REFERENCE DOCUMENTS

For knowledge management purposes, listed below are all previous revisions of this procedure, as well as associated correspondence with stakeholders, that have been entered into the NRC's Agencywide Document Access Management System (ADAMS).

No.	Date	Document Title/Description	Accession Number
1	5/7/04	STP-04-036, Opportunity to Comment on Draft Revision to STP Procedure 103	ML041320664
2	11/16/05	Summary of Comments on SA-103	ML061150458
3	1/11/06	STP-06-006, Final STP Procedure SA-103	ML060110366
4	1/11/06	STP Procedure SA-103	ML061150228
5	1/11/06	STP Procedure SA-103 (redline/strikeout)	ML061150458
6	12/18/19	Interim NMSS Procedure SA-103	ML19317E286
7	8/11/20	Resolution of Comments	ML20224A143
8	09/15/20	Final NMSS Procedure SA-103	ML20238B904