



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

***Reviewing the Common Performance Indicator,
Technical Quality of Inspections
Interim State Agreements (SA) Procedure SA-102***

Issue Date:

Review Date:

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Date:

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Date:

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Date:

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Date:

ML20XXXAXXX

NOTE

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



I. INTRODUCTION

This document describes the procedure for conducting reviews of Agreement States and U.S. Nuclear Regulatory Commission (NRC) radiation control programs using the common performance indicator, Technical Quality of Inspections [NRC Management Directive (MD) 5.6, *Integrated Materials Performance Evaluation Program (IMPEP)*].

II. OBJECTIVES

- A. To verify that the Agreement State and NRC inspections of licensed activities focus on health, safety, and security issues in accordance with NRC Inspection Manual Chapter (IMC) 2800, *Materials Inspection Program* and the applicable Inspection Procedure (IP) (IPs 87102 through 87654 series), or Agreement State equivalent procedure.
- B. To verify that processes or procedures are established and followed to capture and address inspection-related findings that indicate the need to modify, correct, or amend licenses.
- C. For Agreement States, to determine that inspection policies, procedures, and guidance are consistent with NRC policies, procedures, and guidance, and are being implemented by the Program.
- D. To verify that the inspection findings are well-founded and well-documented in inspection reports and lead to appropriate and prompt regulatory action.
- E. To verify that the inspections address the necessary focus elements and that inspection records and findings are reviewed promptly by supervisors or management.
- F. Established procedures are used to identify root causes of findings and poor licensee performance. [NOTE: if there is a programmatic issue with procedures, see the Non-Common Program Performance Indicator "Legislation, Regulations, and Other Program Elements (LROPE)."]
- G. To confirm that inspections address previously identified performance issues.
- H. To confirm that supervisors ensure accompaniments of each inspector are conducted annually to evaluate the inspector's performance; and to assess whether the methods utilized for conducting accompaniments are effective in identifying performance issues.

III. BACKGROUND

This performance indicator is a companion to the common performance indicator, Status of Materials Inspection Program, and is meant to elicit information about the quality of inspections. IMPEP team member(s) will accompany a sample of the inspectors performing different types of licensed activities to directly evaluate the performance of the inspectors. IMPEP team member(s) will also conduct in-depth, on-site reviews of a representative sample of completed inspection files. These reviews will focus on the scope, completeness, and technical accuracy of completed inspections and related documentation.

IV. ROLES AND RESPONSIBILITIES

A. Team Leader:

1. In coordination with the IMPEP Program Manager, the Team Leader determines which team member is assigned lead review responsibility.
2. Assigns team member(s) to perform inspector accompaniments.
3. Gathers the information from the Program necessary to select the inspectors to be accompanied and licensed activities to be inspected.
4. Selects inspections based upon radiological safety and security significance of the licensed activity, from the Program's pending inspections. Focusing on safety and security risk-significant inspections assures identification of programmatic weaknesses that would have the greatest impact on public health and safety and security of licensed materials. The Team Leader may delegate these actions to the principal reviewer.
5. 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 selected inspection casework files, conducts staff discussions, and maintains a reference summary document of all inspection casework reviewed.
2. Conducts inspector accompaniments (unless they are conducted by an alternate team member(s)) and maintains a reference summary document related to the accompaniments.
3. Informs the Team Leader of the team's findings throughout the onsite review.
4. Presents the team's findings to the Program at the staff exit meeting.
5. Completes their portion of the IMPEP report for the Technical Quality of Inspections performance indicator.

6. Attends the Management Review Board meeting for the review and discusses the team's findings (this can be done either in person or via teleconference).

V. GUIDANCE

A. Scope

1. This procedure applies to the review of the technical quality of completed radioactive materials inspection actions performed in the period since the last review. The principal reviewer for this indicator may find it necessary to perform a limited review of earlier inspection actions to ensure that, for example: recommendations identified during a previous IMPEP review have been addressed; findings from previous inspections have been addressed; or to verify that inspections conducted during the review period were performed in accordance with the time frames established in procedures and commensurate with the risk.
2. This procedure includes inspection accompaniments to observe the inspectors' performance and demonstration of proper inspection techniques. The number of accompaniments to be performed depends on the size of the Program. In most cases, the goal is to accompany at least one-half of the Program's inspectors. For a Program with few inspectors (5 or less), consideration should be given to accompanying all the inspectors.
3. This procedure specifically excludes the Agreement State and NRC inspections of licensees that are not authorized for the possession, use, or storage of byproduct material, as defined in 10 CFR 20.1003, inspections of licensees with non-Atomic Energy Act material (e.g., naturally occurring radioactive material (NORM)), and generally licensed radioactive material.

B. Preparation

1. Prior to the inspector accompaniments, the assigned reviewer(s) should:
 - a. Remind the Program that all materials inspectors are candidates for inspector accompaniments.
 - b. Select from the newly qualified inspectors and inspectors that were not accompanied during the previous review.
 - c. Confirm the inspector's qualifications prior to the accompaniments to ensure the inspector is qualified to perform the particular inspection assigned.

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- d. Schedule inspector accompaniments in advance of the on-site portion of the IMPEP review. For example, risk-significant/complex licensees are inspected every 1-2 years. For a small radiation control Program, with fewer risk-significant licensees, it may be necessary to conduct accompaniments up to a year in advance of the on-site IMPEP review to ensure inspection accompaniments of such licensees.
- e. Consider performing an increased number of inspector accompaniments involving a particular type of licensed activity to cover previously identified weaknesses.
- f. Ensure that inspector accompaniments do not cause any inspection to become overdue.
- g. Consider selecting inspections that typically take one work day to perform. These types of inspections allow the reviewer to observe the entire inspection process from beginning to end and allow for the reviewer to maximize efficiency and conduct additional accompaniments during the week. However, inspections of complex licensees may take longer than one day and are acceptable candidates for inspector accompaniments.
- h. Select a representative sample that includes licensees implementing security requirements for Category 1 and Category 2 Risk Significant Radioactive Material.
- i. Coordinate with the Program's inspector(s) to be accompanied as to the logistics of the accompaniment, such as when and where to meet. Information should be gathered as to any specific security requirements, attire, or personal protective equipment that may be required for access to the licensed facilities being inspected (e.g., safety shoes, safety glasses).
- j. Obtain a copy of the license, the previous inspection documentation, and any licensee submitted corrective actions from the previous inspection, if applicable for inspection accompaniments. The purposes of these documents would be limited to evaluating the inspector and not be used to review a licensee's radiation safety program.
- k. Discuss with each inspector the extent of the reviewer's role in the inspection. It is not the role of the reviewer to help with the inspection effort or participate in the inspection, but rather to observe the inspector's performance during the conduct of the inspection. Observation of the inspector may include discreetly interacting with or asking questions of the inspector. IMPEP inspector accompaniments are performance-based evaluations of inspector effectiveness.
- l. Discuss with each inspector the methods (see Appendix A) that will be used in evaluating the inspector's performance and how feedback will be provided to the inspector and his or her management.

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2. If either the accompaniments or inspection case files reveal weaknesses, the reviewer(s) should attempt to determine whether the issue is isolated or represents a programmatic weakness and should inform the Team Leader as soon as possible. The reviewer(s) should attempt to determine the root cause(s) of any identified weaknesses.
- C. Review Guidelines
1. For each inspector accompanied, the reviewer should evaluate the inspector's performance:
 - a. Inspections should be of sufficient scope to determine whether the health, safety, and security of licensed activities were adequately addressed;
 - b. Inspectors should gather sufficient information to substantiate any identified violations or non-compliances; inspection findings and expectations regarding corrective actions should be clearly communicated at the conclusion of the inspection;
 - c. Any violations, non-compliances, and/or unresolved items identified during previous related inspections should be reviewed during the inspection to assure that they were appropriately addressed by the licensee;
 - d. Inspectors should use appropriate and calibrated instrumentation for performing independent and/or confirmatory measurements for the type of licensed activity inspected; Inspectors should utilize proper techniques when using instrumentation;
 - e. Inspectors should observe licensee activities including activities at temporary job sites, field stations, or satellite facilities, and ensure the activities observed are appropriately described; and,
 - f. Inspectors should demonstrate proper evaluation of radiation safety conditions as well as the security of licensed materials.
 - g. Any concerns should be discussed with the Team Leader as soon as possible. If the inspector accompaniments indicate a potential weakness on the part of one inspector or with respect to inspections of certain types of licensed activities, the Team Leader should assess whether additional inspection accompaniments are necessary and discuss this matter with the Program management.
 2. Prior to the full team on-site review, the principal reviewer(s) should:
 - a. 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.

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- b. Obtain a list containing the inspector name, inspection completion dates, name of licensee, and type of licensed activity from the Program for the review period. The principal reviewer can make their casework selection from this list.
- c. Select a representative risk-informed inspection casework sample considering the following:
 - i. Select 15-25 casework files from a list of all material inspections started and/or completed by the Program since its last performance review.
 - ii. Select files that cover the qualified inspectors for the review period; focus on a variety of priority 1,2, and 3 licensed activities (e.g., risk significant radioactive material licensees). The casework may include the inspection documentation from the inspection accompaniments and initial inspections. Inspection casework review should represent a cross section of the Program's inspectors.
 - iii. Select a representative sample of inspections of licensees implementing security requirements for Category 1 and Category 2 Risk Significant Radioactive Material.
 - iv. Select a risk-informed sample of the Program's inspection casework for review, based upon safety and security significance of the licensed activity. The use of risk-informed sampling, rather than random sampling, maximizes the effectiveness of the review of inspection casework files. Focusing on safety and security risk-significant inspection activities, assures the identification of programmatic weaknesses that may impact public health, safety, and security of licensed materials.
 - v. Select a cross-section of licensed activities, including medical, industrial, and academic uses. Casework selected for review should focus on higher risk-significant activities, such as medical activities requiring written directives, emerging medical technologies, panoramic and underwater irradiators, industrial radiography, radiopharmacy, isotope production/cyclotron, manufacturers/distributors, broad scope licensees, complex decommissioning, service providers approved for category 2 and higher radioactive materials, and other appropriate activities.
 - vi. Select reciprocity inspections, temporary job site inspections, inspections related to license termination, bankruptcy, and decommissioning activities, as appropriate.

- vii. Include additional casework if a previous programmatic weakness was identified in the last IMPEP review to assure that the weakness has been addressed.
 - d. Obtain a copy of IMC 2800 or equivalent Agreement State Program procedure.
 - e. Request the Program have available relevant inspection procedures for review when the team arrives on-site.
- 2. The principal reviewer should evaluate the following:
 - a. For written procedures and processes:
 - i. Determine that Agreement State inspection policies, procedures, and guidance are in place and are consistent with NRC inspection policies, procedures, and guidance. Inspectors should be familiar with the inspection policies, procedures, and guidance. These should include procedures to help identify root causes and other causal factors related to identified findings and poor licensee performance. The review of inspection casework files and the inspector accompaniments should demonstrate consistent implementation of the established inspection program.
 - ii. Verify that processes or procedures have been established by the Program to capture inspection-related findings that indicate the need to modify, correct, or amend licenses. If the Program has identified any such inspection-related findings, confirm independently that those actions have been completed as necessary. For Programs with separate inspection and licensing staff, determine how inspection-related matters are communicated to licensing staff and how licensing actions are initiated and completed as necessary.
 - b. Compare inspection priorities against NRC inspection priorities. Differences in the Program's inspection priorities from NRC priorities should be brought to the attention of the Team Leader.
 - c. For each inspection casework file selected, the reviewer should evaluate that the file adequately documents or contains (as appropriate):
 - i. Ensure that all relevant documents, letters, file notes, email correspondence, and telephone conversations related to the inspections are complete and, in the file, or are otherwise easily retrievable.
 - ii. Sufficient detail to demonstrate that each inspection was adequate to assess the health, safety, and security of licensed activities;

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- iii. A description of the scope of each inspection such that a future inspector will understand which items or aspects of the licensed activities were reviewed, and which were not and may warrant review during future inspections;
 - iv. Sufficient information to substantiate any identified violations or non-compliances; that regulatory actions issued to licensees are appropriate for the safety and/or security significance of the identified violations; and that violations are clearly communicated to licensees and dispatched in accordance with the established procedures;
 - v. Any violations, non-compliances, and/or unresolved items identified during previous inspections were appropriately addressed by the licensee;
 - vi. Program management review of inspection documentation has been sufficient to ensure that management identified deficiencies (e.g., unsupported conclusions and opinions in the inspection documentation, violations not properly substantiated, and apparent violations not cited) and has brought these deficiencies to the attention of the inspector for resolution;
 - vii. Review of licensee responses have been evaluated by the Program for adequacy and that any subsequent follow-up actions taken were appropriate;
 - viii. Instrumentation used by inspectors for independent or confirmatory measurements were calibrated at appropriate intervals and were appropriate for the types of licensed activities that were inspected; and,
 - ix. Licensee activities observed by the inspector(s), including activities at temporary job sites, field stations, or satellite facilities, were appropriately described.
- d. For accompaniments of inspectors, the reviewer should:
- i. Verify that the Program supervisor ensures all inspectors are accompanied on at least one inspection per year to evaluate the inspector's performance.
 - ii. Assess whether the methods utilized for conducting accompaniments are effective in identifying performance issues that need to be corrected.
 - iii. Confirm that the individual who accompanies inspectors to evaluate their performance is familiar with the types of inspection on which they are accompanying their inspectors (See Appendix B, Question 3).

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- iv. Ensure the Program documents the annual inspector accompaniments.

D. Review Information Summary

1. At a minimum, the inspection casework summary reviewed by the principal IMPEP reviewer will include:
 - a. Licensee name;
 - b. License number;
 - c. Location(s) inspected (city, state);
 - d. Inspection priority (For consistency, the reviewer should document the appropriate NRC inspection priority.);
 - e. Description of licensed activity;
 - f. Inspector(s) name;
 - g. Type of inspection (e.g., routine/initial/special/reciprocity; announced/unannounced; office/temporary job site);
 - h. Date(s) of inspection;
 - i. Inspection findings;
 - j. Date inspection findings were issued; and,
 - k. Reviewer's comments related to identified performance issues.
2. At a minimum, the information maintained by the assigned reviewer for the inspector accompaniments will include:
 - a. The name of the inspector accompanied;
 - b. Licensee name;
 - c. License number;
 - d. Location(s) inspected (city, state);
 - e. Inspection priority (For consistency, the reviewer should document the appropriate NRC inspection priority.);
 - f. Description of licensed activity inspected
 - g. Type of inspection (e.g., routine/initial/special/reciprocity; announced/unannounced; office/temporary job site);
 - h. Date(s) of inspection; and
 - i. Reviewer's comments related to observed performance issues and discussed with the inspector.

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3. Appendix C, Inspection Casework Review Summary Sheet, provides a template for recording the necessary information that should be maintained by the principal reviewer. The reviewer is not required to use Appendix C but may find it to be a useful tool for recording the necessary information.
4. Appendix A, Inspector Accompaniment Summary Sheet, was developed to assist the reviewer in performing and documenting the inspector accompaniments. The reviewer is not required to use Appendix A but may find it to be a useful tool.
5. Not all the information maintained in the reviewer's summary of the inspection casework files reviewed or inspection accompaniments performed will be included in the IMPEP report. The Team Leader can provide guidance as to what information is necessary to include in the report. Any information that is included in the IMPEP report must be factual, should be concise, and should concentrate on identified or observed performance deficiencies and their root cause(s).

E. 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 is as follows:
 - a. IMPEP inspector accompaniments indicate that inspectors are knowledgeable of the requirements for license types being inspected; are able to identify potential health, safety, and security concerns; and demonstrate proper inspection technique.
 - b. An evaluation of inspection casework (e.g., 15-25 casework files, depending on the size of the Program) indicates that inspections are complete, inspection findings are well founded, and inspection results are reviewed promptly by Program management.
 - c. The Program's inspection procedures are compatible with the criteria in IMC 2800, the applicable Inspection Procedure (IP) (IPs 87102 through 87654 series), or Agreement State equivalent procedures.
 - d. The Program's inspection procedures are implemented by the inspectors.
 - e. Inspection findings lead to appropriate and prompt regulatory action.
 - f. Supervisors or designated senior staff accompany all inspectors on an annual basis.
 - g. Followup actions regarding inspection findings are performed in accordance with the criteria in IMC 2800 and this procedure, or compatible Agreement State procedure.

Appendix D contains examples to assist the reviewer in identifying less than fully satisfactory findings of a Program's performance.

- F. Discussion of Findings with the Radiation Control Program
1. The IMPEP team should follow the guidance in State Agreements (SA) Procedure SA-100, *Implementation of the Integrated Materials Performance Evaluation Program (IMPEP)*, for discussions of technical findings with inspectors, supervisors, and management. 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.
 2. 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.

VI. APPENDICES

- A. Inspector Accompaniment Summary Sheet
- B. Frequently Asked Questions
- C. Inspection Casework Review Summary Sheet
- D. Examples of Less than Fully Satisfactory Findings of a Program Performance

VII. REFERENCES

1. Management Directives (MD) available at <https://scp.nrc.gov>.
2. NMSS SA Procedures available at <https://scp.nrc.gov>.
3. NRC Inspection Manual Chapters available at <https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/>.

VIII. 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	6/28/04	STP-04-045, Opportunity to Comment on Draft Revisions to STP Procedure SA-102	ML041800434
2	3/28/05	Summary of Comments on SA-102	ML052250018
3	4/12/05	STP-05-030, Final STP Procedure SA-102	ML051080398
4	4/12/05	STP Procedure SA-102	ML052250016
5	5/17/07	FSME-07-048, Opportunity to Comment on Draft Revision to FSME Procedure SA-102	ML071400011
6	6/25/07	FSME Procedure SA-102, Resolution of Comments	ML072160007
7	7/23/07	FSME Procedure SA-102	ML072160005
8	1/6/16	NMSS Procedure SA-102	ML15090A159
9	1/6/16	Resolution of Comments	on scp website
10		NMSS Procedure SA-102	ML19134A271

ITEM	OK or N/A	COMMENTS
INSPECTOR'S PREPARATION		
Adequate review of license, tie-down conditions, & compliance history		
Inspection procedure(s), guidance, plan or field form		
Appropriate radiation detection and measurement instruments for activities inspected Calibrated Instrument response check, if appropriate		
Supplemental materials: Identification Regulations Forms Dosimetry		
OPENING		
Entrance briefing conducted at appropriate level		
Explanation of inspection purpose, scope, method		
INSPECTION		
Use of appropriate inspection form or checklist		

"Walk through" at beginning of inspection		
Observation of licensee performance, licensee operations, licensed activities in progress		
Independent and/or confirmatory measurements performed including validation of public dose limits		
Facilities checked for proper posting, materials checked for proper labeling		
<p>Security verified</p> <ul style="list-style-type: none"> security of less than category 2 security of category 2 or higher <ul style="list-style-type: none"> o verification of NSTS o background investigations, access authorization, trustworthiness & reliability o physical protection of materials in use o physical protection of materials in transit o review of selected records related to security requirements 		
Workers checked for proper dosimetry		
Interviews and discussions conducted with: <ul style="list-style-type: none"> RAM users Ancillary workers 		
Verification of shielding of materials		
Adherence to ALARA evaluated		
Inspection conducted in sufficient scope & depth		
Verification of corrections to: <ul style="list-style-type: none"> previous violations open or unresolved items 		

Review of management oversight of licensed activities		
Review of incidents, medical events, equipment failures, overexposures, etc.		
Document the specific activity(ies) the inspector reviewed:		
RECORDS REVIEWED		

ITEM	O.K. or N/A	COMMENTS OR QUESTIONS
<p>Inspectors should review records to supplement the performance-based inspection, as appropriate. For example:</p> <ul style="list-style-type: none"> procurement & inventory receipt & transfer of material internal (safety & security) audits radiation safety committee meeting minutes qualification and training of personnel; refresher training authorized users instrument calibration surveys & monitoring personnel dosimetry, bioassay, declarations of pregnancy operating & emergency procedures utilization logs leak tests written directives & patient release financial assurance & decommissioning equipment & maintenance release of air & sewer effluents waste management, storage & disposal hazmat refresher training transportation of materials <input type="checkbox"/> any new licensee procedure 		

INSPECTOR'S PROFESSIONALISM	
Use of proper health physics techniques (self monitoring, time, distance, shielding, use of survey instrument, etc.)	
Accurate evaluation of radiation safety	
Knowledge of health physics & regulations	
Appropriate appearance for license type, including proper use of PPE and safety equipment as appropriate	
Skill in wording questions (open-ended questioning technique)	
Suitable rapport with management and workers	
CLOSING	
Preparation for exit meeting; assembly of supporting material	
Exit conducted at appropriate management level	
Violations fully explained; license condition or regulation cited	
Recommendations clearly distinguished from violations	
Impending enforcement actions explained	
Licensee advised of expected response and need for corrective actions	

SUMMARY OF EVALUATION

The purposes of the inspector accompaniment(s) are to: (a) observe the inspector to ensure the inspector is familiar with the inspection process and procedures; (b) evaluate the adequacy of inspection tools and equipment used; and (c) evaluate the completeness of the on-site inspection.

1.	INSPECTOR'S PERFORMANCE	SATISFACTORY	NEEDS IMPROVEMENT
2.	PERFORMANCE COMMENTS:		
3.	SPECIFIC AREAS OF IMPROVEMENT:		
4.	THE INSPECTOR MIGHT BENEFIT FROM ADDITIONAL TRAINING IN: (SPECIFY TYPE OF TRAINING: e.g., Formal Course, Mentoring, On-The-Job, Webinar, Etc.)		
5.	<input type="checkbox"/> EVALUATION DISCUSSED WITH INSPECTOR AT THE END OF THE INSPECTION ON:		
6.	<input type="checkbox"/> EVALUATION DISCUSSED WITH TEAM LEADER ON:		
7.	<input type="checkbox"/> EVALUATION DISCUSSED DURING CONFERENCE CALL WITH INSPECTOR'S SUPERVISOR/MANAGEMENT AND TEAM LEADER ON:		

APPENDIX B

FREQUENTLY ASKED QUESTIONS

Q1: How often should an inspector be accompanied?

A1: Inspectors should be accompanied at least annually. U.S. Nuclear Regulatory Commission's (NRC) Inspection Manual Chapter 2800, *Materials Inspection Program* notes that the performance of each inspector be evaluated during actual inspections at least annually. In the event that an inspector is not accompanied annually, it should be documented by the supervisor. The documentation should include an explanation and a proposed schedule for performing the accompaniment.

Q2: What if an inspector only performs inspections infrequently or just a few times per year?

A2: Even if the inspector only performs occasional inspections, the inspector should still be accompanied annually during those years when the inspector performed inspections.

Q3: Should the individual who performs the accompaniments be a qualified inspector?

A3: It is not required that the individual who performs accompaniments be a qualified inspector. However, individuals that perform accompaniments should be familiar with the program's inspection practices and procedures. The individual should also be familiar with the type of licensed activity and specific requirements related to the type of licensed activity being inspected during the accompaniment. A supervisor that may not be familiar with inspections of licensed materials may have inspection experience from other program areas and can apply that experience to the accompaniment evaluation. Familiarity with the program's practices and procedures, the licensed activities inspected, and proper inspection techniques will enable the supervisor to provide more constructive feedback regarding the inspector's performance.

Q4: In Agreement States, can senior staff conduct inspector accompaniments rather than the supervisor?

A4: It is expected that supervisors generally conduct the accompaniments; however, for Agreement States, it is acceptable for senior program staff to perform inspector accompaniments when necessary and justified. For example, in an Agreement State where there is a vacancy in a supervisory position, the accompaniments may be performed by qualified, experienced senior staff during the time the vacancy is unfilled rather than not perform accompaniments at all due to the vacancy.

Q5: What should the reviewer do if, during the accompaniment, it is discovered that the inspector has not been qualified to perform that particular type of inspection?

A5: This should not be the case, if the team leader/reviewer confirms the inspector's qualifications prior to the accompaniment. However, if the inspector informs the reviewer or if the reviewer identifies that the inspector is not qualified to perform the inspection, the inspection should not continue. The reviewer should gain a better understanding from the inspector as to what types of licensees the inspector is qualified to inspect. If the inspector was planning on being out on inspection for the week, the reviewer should ascertain if the inspector can readjust his/her schedule so that the reviewer can accompany the inspector on a different inspection where the inspector is qualified. The reviewer should notify the inspector's supervisor and team leader.

In the future, the reviewer should obtain the qualifications for all the inspectors that will be accompanied. The team member(s) performing inspector accompaniments should coordinate with the Agreement State or NRC prior to conducting the inspector accompaniments to assure that the inspectors selected for accompaniments are qualified to inspect the types of licensed activities being observed during the inspections. If an inspector is not fully qualified for all inspection types, but according to the program, is qualified for inspections of certain types of licensed activities, the reviewer can observe the inspector perform inspections of the types of licensed activities that the inspector is qualified to inspect. For example, if an inspector is qualified to inspect radiography licensees and well logging licensees only, they should be observed on these types of inspections, and not other types of inspections.

Q6: If all of the inspectors were accompanied during the last IMPEP review, does the review team need to conduct any accompaniments during the current review?

A6: Yes, even if all the program's inspectors were accompanied during the last IMPEP review, the review team should still conduct inspector accompaniments. The review team member(s) responsible for performing the accompaniments must still ensure that the technical quality of inspections and the technical competency and performance of the inspectors for the review period. In this case, consideration should be given to performing accompaniments of the inspectors for different types of licensed activities than were accompanied during the previous review. For example, if an inspector was accompanied on a medical inspection during the previous review, the inspector can be accompanied on an industrial inspection during the current review.

Q7: What if the Agreement State's inspection policy is to perform compliance-based inspections rather than performance-based inspections?

A7: Agreement States are encouraged, but not required, to conduct performance-based inspections. It is encouraged that inspections strike a balance between performance observations of licensee activities with a review of selected licensee records to verify compliance. Each Agreement State's policies and procedures for the conduct of inspections will be examined during the review. Review teams will conduct reviews in a manner that is consistent with current IMPEP guidance applicable to this indicator and the inspection policy of the State.

Q8: If an Agreement State supervisor performs inspections, should the supervisor also be accompanied annually and by whom?

A8: Inspectors should be accompanied by their supervisor at least annually. Therefore, supervisors who perform inspections should also be accompanied annually.

In Agreement States, sometimes Program Directors perform inspections and it is not practical to have the Program Director's supervisor perform an accompaniment. During previous IMPEP reviews, NRC has found it acceptable for a senior or more experienced inspector to accompany a supervisor that performs inspections. However, in some cases, State labor or personnel practices would prohibit or discourage this approach.

Because every possible scenario cannot be described here, Agreement States that have supervisors that perform inspections should develop and implement a policy that describes its approach to performing and documenting accompaniments of supervisors.

Q9: What if there are concerns regarding an inspector's performance during an inspector accompaniment?

A9: Under no circumstance should a team member conducting an inspector accompaniment allow an item that is of immediate health and safety or security concern to continue to be unidentified during an inspection. If this occurs, it is the responsibility of the reviewer to bring the concerns to the attention of the inspector during the inspection and inform the inspector's supervisor as well as the Team Leader as soon as is practicable. If the concerns are not of immediate health and safety or security significance, or are of unknown health and safety or security significance, the reviewer should allow the accompaniment to continue, but document the concerns in the accompaniment report and discuss the issues with the inspector at the conclusion of the inspection, and subsequently (e.g. end of the day, end of the week, or the following week) with the inspector's supervisor as well as the Team Leader. In all cases, after the inspector has concluded the onsite inspection, the review team member should take a few moments with the inspector and discuss any observed or identified performance issues with the inspector. This will allow for meaningful dialogue between the review team member and the inspector to clarify any issues prior to the review team member briefing the inspector's supervisor and/or program management.

APPENDIX C INSPECTION CASEWORK REVIEW SUMMARY SHEET

A/S OR NRC: _____ REVIEWER: _____ CASEWORK FILE NO.: _____

GENERAL INFORMATION:			
LICENSEE:		LICENSE #:	
LICENSE TYPE:		PRIORITY:	
LOCATION(S) INSPECTED:			
INSPECTION DATE(S):		INSPECTOR(S):	
ADDITIONAL INFORMATION:			
INSPECTION TYPE:			
UNANNOUNCED		ANNOUNCED	
ROUTINE	INITIAL	SPECIAL	RECIPROCITY
OFFICE		TEMPORARY JOB SITE/FIELD STATION	
DATE OF PREVIOUS INSPECTION or DATE OF LICENSE ISSUANCE FOR INITIAL INSPECTIONS:			
FOR ROUTINE INSPECTIONS: CONDUCTED In timeframe established within the procedures			Y N
FOR INITIAL INSPECTIONS: CONDUCTED in the timeframe established within the procedure			Y N
SUPERVISORY REVIEW OF INSPECTION FINDINGS BY:			DATE:
DATE INSPECTION FINDINGS ISSUED:		WITHIN 30 DAYS OF INSPECTION? Y N	
PERFORMANCE COMMENTS TO INCLUDE INSPECTION FINDINGS			
COMMENTS DISCUSSED WITH:			DATE:

ITEM	OK or N/A	COMMENTS
INSPECTOR'S PREPARATION		
Adequate review of license, tie-down conditions, & compliance history		
Inspection procedure(s), guidance, plan or field form		
Appropriate radiation detection and measurement instruments for activities inspected Calibrated Instrument response check, if appropriate		
Supplemental materials: Identification Regulations Forms Dosimetry		
OPENING		
Entrance briefing conducted at appropriate level		
Explanation of inspection purpose, scope, method		
INSPECTION		
Use of appropriate inspection form or checklist		

"Walk through" at beginning of inspection		
Observation of licensee performance, licensee operations, licensed activities in progress		
Independent and/or confirmatory measurements performed including validation of public dose limits		
Facilities checked for proper posting, materials checked for proper labeling		
<p>Security verified</p> <ul style="list-style-type: none"> security of less than category 2 security of category 2 or higher <ul style="list-style-type: none"> o verification of NSTS o background investigations, access authorization, trustworthiness & reliability o physical protection of materials in use o physical protection of materials in transit o review of selected records related to security requirements 		
Workers checked for proper dosimetry		
Interviews and discussions conducted with: <ul style="list-style-type: none"> RAM users Ancillary workers 		
Verification of shielding of materials		
Adherence to ALARA evaluated		
Inspection conducted in sufficient scope & depth		
Verification of corrections to: <ul style="list-style-type: none"> previous violations open or unresolved items 		

Review of management oversight of licensed activities		
Review of incidents, medical events, equipment failures, overexposures, etc.		
Document the specific activity(ies) the inspector reviewed:		
RECORDS REVIEWED		

ITEM	O.K. or N/A	COMMENTS OR QUESTIONS
<p>Inspectors should review records to supplement the performance-based inspection, as appropriate. For example:</p> <ul style="list-style-type: none"> procurement & inventory receipt & transfer of material internal (safety & security) audits radiation safety committee meeting minutes qualification and training of personnel; refresher training authorized users instrument calibration surveys & monitoring personnel dosimetry, bioassay, declarations of pregnancy operating & emergency procedures utilization logs leak tests written directives & patient release financial assurance & decommissioning equipment & maintenance release of air & sewer effluents waste management, storage & disposal hazmat refresher training transportation of materials <input type="checkbox"/> any new licensee procedure 		

INSPECTOR'S PROFESSIONALISM	
Use of proper health physics techniques (self monitoring, time, distance, shielding, use of survey instrument, etc.)	
Accurate evaluation of radiation safety	
Knowledge of health physics & regulations	
Appropriate appearance for license type, including proper use of PPE and safety equipment as appropriate	
Skill in wording questions (open-ended questioning technique)	
Suitable rapport with management and workers	
CLOSING	
Preparation for exit meeting; assembly of supporting material	
Exit conducted at appropriate management level	
Violations fully explained; license condition or regulation cited	
Recommendations clearly distinguished from violations	
Impending enforcement actions explained	
Licensee advised of expected response and need for corrective actions	

SUMMARY OF EVALUATION

The purposes of the inspector accompaniment(s) are to: (a) observe the inspector to ensure the inspector is familiar with the inspection process and procedures; (b) evaluate the adequacy of inspection tools and equipment used; and (c) evaluate the completeness of the on-site inspection.

1.	INSPECTOR'S PERFORMANCE	SATISFACTORY	NEEDS IMPROVEMENT
2.	PERFORMANCE COMMENTS:		
3.	SPECIFIC AREAS OF IMPROVEMENT:		
4.	THE INSPECTOR MIGHT BENEFIT FROM ADDITIONAL TRAINING IN: (SPECIFY TYPE OF TRAINING: e.g., Formal Course, Mentoring, On-The-Job, Webinar, Etc.)		
5.	<input type="checkbox"/> EVALUATION DISCUSSED WITH INSPECTOR AT THE END OF THE INSPECTION ON:		
6.	<input type="checkbox"/> EVALUATION DISCUSSED WITH TEAM LEADER ON:		
7.	<input type="checkbox"/> EVALUATION DISCUSSED DURING CONFERENCE CALL WITH INSPECTOR'S SUPERVISOR/MANAGEMENT AND TEAM LEADER ON:		

APPENDIX D

EXAMPLES OF LESS THAN FULLY SATISFACTORY FINDINGS OF A PROGRAM PERFORMANCE

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 fully 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.

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:

During more than a few (and less than most) accompaniments, inspectors missed identifying violations and were not knowledgeable of the regulations or license conditions regarding these violations. The violations had potential lower health, safety, and/or security consequences, such as the following:

- Failure to perform an annual program review
- Transporting the shipping paper in the glove box
- Performing leak tests annually instead of every six months
- Failure to perform a linearity check for a dose calibrator
- Failure to perform a physical inventory of well logging sources
- Failure to secure a portable gauge with two independent physical controls when not under the direct control of the licensee

More than a few (and less than most) inspection casework files indicated that there were previously cited violations which dealt with health, safety, and/or security concerns. However, the inspection documentation did not address those previously cited violations, and interviews with inspectors indicated that the previously cited items were not reviewed during the most recent inspections.

More than a few (and less than most) casework files indicated that the documentation was not complete or was lacking required elements (e.g. security was not reviewed during a blood irradiator inspection; an HDR was not inspected at a broad scope medical inspection, transportation was not reviewed at a pharmacy). Interviews with inspectors confirmed that those elements were not reviewed during the inspections. Program management review of inspection documentation did not identify this gap.

For more than a few (and less than most) medical inspection casework reviewed, the Program's inspectors did not examine written directives for therapeutic doses to determine whether a medical event occurred for licensee's who are authorized for activities under 10 CFR 35.300, 35.400, 35.600, and 35.1000.

The reviewer observed that the inspection procedures utilized by the Program were not consistent with the inspection guidance outlined in IMC 2800. In December 2010, changes to

IMC 2800 were announced to Agreement States, who had 6 months to implement the changes. The changes included revised security inspection frequency, requirements for initial security inspections, and pre-licensing visits. Additionally, the inspection guidance addressed the use of the National Source Tracking System (NSTS) which is to be reviewed during each inspection of those licensees authorized to possess greater than or equal to Category 2 quantities of radioactive material. The Program did not update its inspection guidance and inspectors were not aware of the changes, including the required NSTS reviews.

During more than a few (and less than most) of the accompanied inspections, the inspectors did not directly observe work activities or interview workers present on site. The inspectors relied solely on a review of records and speaking with the licensee's radiation safety officer. Even though the Program's inspection procedures state the inspector's evaluation of a licensee's program shall be based on direct observation of work activities, interviews with workers, demonstrations by workers performing licensed activities, and independent measurements of radiation conditions at the facility, rather than exclusive reliance on a review of records.

Supervisory accompaniments were not performed by qualified individuals for more than a few (and less than most) of the inspectors during the review period and inspector accompaniments by the IMPEP team member identified performance concerns.

NOTE: This list is not all inclusive and will be maintained and updated in the IMPEP Toolbox on the state communications portal website.

Consideration should be given to a finding of "**unsatisfactory**" when a review demonstrates the presence of one or more of the following conditions:

During most of the inspection accompaniments, inspectors missed identifying violations and were not knowledgeable of the regulations or license conditions regarding these violations. The violations had potential significant health, safety, and/or security consequences, such as the following:

- Operating a permanent radiography cell without an operating audible/visible alarm
- Failure to perform a spot-check for a gamma stereotactic radiosurgery unit before the first use of the day
- Failure to secure a radiographic exposure device at a temporary jobsite with two tangible barriers when not under the direct control of the licensee
- Failure to perform thyroid bioassays for a scientist who weekly performed 20 mCi iodinations with I-125
- Failure to assess a skin contamination event at a PET hot cell.

A majority of the casework files reviewed were inspections of medical facilities with administrations requiring written directives. For most casework files reviewed, the documentation indicated that administrations of radioactive materials were in excess of the written directive by more than 20%; however, this was not identified as a violation in any of the files. Interviews with Program staff indicated that they were unaware of the relevant regulation and the management review was inadequate to identify the discrepancy.

The reviewer found that the Program was not evaluating compliance with 10 CFR Part 37 during the initial inspections for most of their new licensees possessing risk-significant radioactive material (RSRM). The Program's procedures did not address initial security inspections.

During the accompaniments, the Program's inspectors did not address written directives, the determination of the prescribed dose, the validation of the prescribed dose compared to the

administered dose, or the determination of a medical event. No written directives were reviewed during the accompaniments. A review of selected medical inspection documentation showed a lack of review of written directives and medical events. Program management review of inspection documentation and supervisory accompaniments also did not identify this gap.

During most inspection accompaniments for licensees who possess RSRM, the inspectors failed to verify that select alarm systems were functioning as designed. The inspectors did not have licensee personnel verify the security systems' functionality. The inspector did not verify that the licensee regularly tested the alarms.

Most of the casework reviewed for licensees who possess RSRM demonstrated that the inspectors did not review the licensee's access authorization program. The inspectors noted in their report that new personnel were hired since the last inspection and were granted unescorted access to the security zone. During interviews, the inspectors confirmed that they did not review the access authorization process and relied solely on the licensee's conclusion for trustworthiness and reliability.

Based on interviews with the Program's inspectors and a review of inspection casework, most of the inspections with licensees who had previously identified non-compliances were not evaluated by the inspectors. Inspectors did not evaluate the effectiveness of the licensee's corrective actions to prevent recurrence. The Program's procedure was missing verification of previous violations.

Supervisory accompaniments were not performed by qualified individuals for most of the inspectors during the review period and inspector accompaniments by the IMPEP team member identified performance concerns.