

NRC INSPECTION MANUAL

IRGB

INSPECTION MANUAL CHAPTER 1245, APPENDIX C6

EMERGENCY PREPAREDNESS INSPECTOR TECHNICAL PROFICIENCY TRAINING AND QUALIFICATION JOURNAL

Effective Date: 08/23/2018

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Introduction

Do not begin the activities or complete the courses in this qualification journal until you have completed the Basic Inspector Certification Journal. You may complete the General Proficiency requirements contained in Appendix B together with the Technical Proficiency requirements outlined in this journal.

Before signing up for any course, be sure that you have checked and have met any prerequisites.

Required Emergency Preparedness Inspector Training Courses:
(Require the completion of Appendix A)

- (R-104B) - GE Technology
- (R-104P) - Westinghouse Technology
- (H-203) - Emergency Preparedness Technology

Additional Emergency Preparedness Inspector Training Courses:
(This course DOES NOT require the completion of Appendix A but you must meet any course prerequisites.)

- (E-110S) - Power Plant Engineering (self-study of selected chapters)

Supplemental Post Qualification and Required Refresher Training:

This Section has been moved to Appendix D-1.

Emergency Preparedness Inspector Continuing Training

- (H-402) - Emergency Preparedness Special Topics

Emergency Preparedness Individual Study Activities
Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-1) Code of Federal Regulations for Emergency Preparedness Inspectors

PURPOSE: The purpose of this activity is to familiarize you with the regulations having direct application to emergency preparedness inspections. By ensuring that the facility licensee is in compliance with the provisions delineated in the Code of Federal Regulations we determine whether a licensee is meeting the Emergency Preparedness Cornerstone Objectives.

COMPETENCY
AREA: REGULATORY FRAMEWORK
TECHNICAL AREA EXPERTISE

LEVEL OF
EFFORT: 16 hours

REFERENCES: 10 CFR 50.47
10 CFR 50.54(q-u)
10 CFR 50 Appendix E
10 CFR 100
44 CFR Parts 2, 350-352

EVALUATION
CRITERIA: At the completion of this activity you should be able to:

1. Describe each of the (16) Planning Standards for an emergency response plan.
2. Discuss which Planning Standards are risk significant.
3. Contrast the responsibilities of the facility licensee for emergency preparedness with those of the State and local organization.
4. Describe the significance of Section IV.F.2.g of Appendix E to 10 CFR 50 as it relates to the correction of EP weaknesses and deficiencies.
5. Describe the requirements of making changes to the licensee's emergency plans as provided for in 10 CFR 50.54(q).
6. Describe the audit requirements of 10 CFR 50.54(t).
7. Describe the 10 CFR 100 limits for exposure to the general public during an event.

8. Give an overview of the FEMA's responsibilities for offsite planning and response for nuclear power plants.
- TASKS:
1. Review pertinent sections of 10 CFR 50 to familiarize yourself with the standards for emergency planning.
 2. Review 10 CFR 100, Reactor Site Criteria, to become familiar with the definitions and requirements for the exclusion area, low population area, and populations center distance.
 3. Review 44 CFR Parts 2, 350-352 to gain an understanding of FEMA's responsibilities for offsite planning.
 4. Meet with your supervisor or qualified EP inspectors to discuss any questions you might have.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-1

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-2) Licensee Emergency Plan Documents

PURPOSE: The purpose of this activity is to become familiar with examples of an Emergency Plan and supporting licensee documents. Supporting documents are used to either implement the Plan during a drill/exercise/actual emergency event; to maintain emergency response facilities and equipment in an acceptable state of operational readiness; or, to gather and assess performance indicator information.

COMPETENCY
AREA: TECHNICAL AREA EXPERTISE

LEVEL OF
EFFORT: 40 hours

REFERENCES: Emergency Plan

Emergency Plan Implementing Procedures (EPIP)

Site-specific Emergency Action Levels (EAL) technical bases document

Emergency Plan equipment inventory and surveillance procedures

Emergency Response Organization (ERO) training program procedures

Procedures for compiling and self-assessing records of emergency preparedness Performance indicators (PI)

Plume exposure pathway Emergency Planning Zone (EPZ) evacuation time estimates study

Relevant Technical Specifications

Relevant sections of the USAR

EVALUATION
CRITERIA: At the completion of this activity, you should be able to:

1. Discuss how a designated licensee's Emergency Plan was organized and designed to satisfy emergency preparedness regulatory requirements and guidance.
2. Discuss how this licensee's Emergency Plan commitments would be implemented and fulfilled through its use of EIPs.
3. Discuss how this licensee developed and maintains site-specific EALs consistent with regulatory requirements and applicable regulatory guidance.

4. Discuss how this licensee has proceduralized equipment inventory and surveillance tests to ensure that its emergency response facilities and equipment would be maintained in an acceptable state of operational readiness per Emergency Plan commitments.
5. Discuss how this licensee has established an ERO training program to meet regulatory requirements and to fulfill Emergency Plan commitments.
6. Discuss the licensee procedures for gathering and self-assessing its records for emergency preparedness PI submittals to NRC.
7. Discuss a licensee's evacuation time estimates study for its site's plume exposure pathway EPZ.
8. Identify and discuss a designated licensee's Technical Specifications that are related to maintaining its Emergency Plan commitments.
9. Identify and discuss sections of the USAR that are related to Emergency Plan commitments.

TASKS:

1. Review copies of an operating power reactor licensee's Emergency Plan designated by your supervisor.
2. Review copies of the same licensee's EIPs.
3. Review the same licensee's technical bases document for its site-specific EALs.
4. Review the same licensee's procedures for inventories and surveillance tests that would be done to maintain its emergency response facilities and equipment in an acceptable state of operational readiness.
5. Review the same licensee's procedures for training its personnel on their assigned emergency response duties.
6. Review a designated licensee's procedures for compiling and self-assessing records related to its periodic emergency preparedness PI submittals to NRC.
7. Review a designated licensee's evacuation time estimates study for its site's plume exposure pathway EPZ.
8. Review a designated licensee's Technical Specifications for statements on its emergency plan commitments.
9. Review a designated licensee's USAR for sections on its emergency plan commitments.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-2

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-3) Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness

PURPOSE: The purpose of this activity is to acquaint you with the criteria used by NRC licensees, State and local governments to develop radiological emergency plans and improve emergency preparedness. A major portion of NUREG-0654 parallels and amplifies the 16 planning standards listed in 10 CFR 50.47(b). It also provides guidance for an acceptable emergency action level scheme, the alert and notification system, and evacuation time estimates.

COMPETENCY AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 16 hours

REFERENCES: NUREG-0654/FEMA-Rep-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants"

Licensee Emergency Plans

EVALUATION CRITERIA: At the completion of reviewing this document, you should be able to:

1. Discuss key elements of the planning basis
2. Discuss the general topics of the planning standards
3. Discuss the difference between the four emergency classification levels in terms of safety significance to the public
4. Discuss the key functions performed by the licensee and offsite agencies at the various classification levels
5. Discuss purpose, acceptance criteria, design and operation of the notification system

TASKS:

1. Obtain copy of NUREG-0654
2. Read Section I, and Appendices 1, 3, and 4. Review Section II
3. Meet with supervisor or qualified EP inspector to discuss any questions and review the evaluation criteria.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-3

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-4) Functional Criteria for Emergency Response Facilities

PURPOSE: The purpose of this activity is to review the facilities and systems to be used by nuclear power plant licensees to improve responses to emergency situations. This activity will also review the established criteria that the NRC staff used to evaluate whether licensees met the requirements of 10 CFR 50 Appendix E, Section IV.E.8 and Appendix A, GDC 19.

COMPETENCY
AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL
OF EFFORT: 8 hours

REFERENCES: NUREG-0696, "Functional Criteria for Emergency Response Facilities"
10 CFR 50 Appendix E, Section IV.E.8
10 CFR 50 Appendix A, GDC 19.

EVALUATION
CRITERIA: At the completion of reviewing this document, you should be able to:

1. Discuss general functions of the OSC, TSC, and EOF.
2. Discuss the facility design objectives (i.e., location, size, structure, staffing)
3. Discuss the data systems and their design criteria

TASKS:

1. Obtain copy of NUREG-0696
2. Read entire document with emphasis on OSC, TSC, and EOF
3. Meet with supervisor or qualified EP inspector to discuss any questions and review the evaluation criteria.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-4.

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-5) TMI Action Plan Requirements

PURPOSE: This purpose of this activity is to acquaint you with the NRC requirements that resulted from the Three Mile Island Accident lessons learned and identifies any changes from previous requirements and guidance. There are some requirements specific to emergency planning (e.g. shift manning, control-room design reviews, improving licensee emergency preparedness, control-room habitability requirements and plant systems that contribute to offsite dose calculations).

This activity will acquaint you with the reference source for the operation of certain plant systems/instrumentation during a radiological emergency. Supplement No. 1 to **NUREG-0737**, was specific to emergency preparedness and provided additional clarification regarding safety parameter display systems, detailed control room design reviews, Regulatory Guide 1.97, upgrade emergency operating procedure, emergency response facilities and minimum staffing requirements.

COMPETENCY
AREA: INSPECTION

LEVEL
OF EFFORT: 16 hours

REFERENCES: 10 CFR 50.47(b) and Appendix E

NUREG-75/087

Regulatory Guide 1.23

NUREG-0654/FEMA-Rep-1, Revision 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

NUREG-0696, Functional Criteria for Emergency Response Facilities

NUREG-0737, Clarification of TMI Action Plan Requirements and

NUREG-0737 Supplement 1, Requirements for Emergency Response Capability

EVALUATION
CRITERIA: At the completion of reviewing this document, you should be able to:

1. Discuss the various radiological information, both in-plant and environmental, needed for evaluating the offsite consequences (evacuation, sheltering) of a radiological emergency condition.
2. Generally discuss the various plant systems/instrumentation at the

various emergency facilities which display critical plant variables to aid the licensee in rapidly and reliably determining the safety status of the plant.

3. Discuss the importance for control room habitability requirements and what measures licensees have taken to ensure compliance.
4. Generally discuss the use of emergency operating procedures and the purpose of the emergency response facilities.

- TASKS:
1. Review the reference materials described above.
 2. Scan all sections of NUREG 0737. Read, in depth, sections I.A.1.3, I.D.1, II.B.3, II.F.1, and attachments 1-6, III.A.2, III.D.3.4.
 3. Meet with supervisor or qualified EP inspector to discuss any questions and review the evaluation criteria.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-5.

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-6) Manual of Protective Action Guides and Protective Actions for Nuclear Incidents

PURPOSE: The purpose of this activity is to have you become familiar with the guidance used by decision makers regarding the appropriate protective actions to take in the event of a radiological emergency.

COMPETENCY
AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL
OF EFFORT: 8 hours

REFERENCES: EPA 400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents"

EVALUATION
CRITERIA: At the completion of reviewing this document, you should be able to:

1. Discuss the different phases of an accident.
2. Discuss the protective action guidelines for the early phase
3. Discuss the range of possible protective action recommendations
4. Discuss possible exceptions to implementing the protective actions
5. Discuss the protective action guidelines for the late phase
6. Discuss the various exposure pathways

TASKS:

1. Obtain copy of EPA 400-R-92-001
2. Read chapters 1 through 5
3. Meet with supervisor or qualified EP inspector to discuss any questions and review the evaluation criteria.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-6.

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-7) RTM-96, Response Technical Manual

PURPOSE: The purpose of this activity is to provide a review of the simple methods used for estimating possible consequences of different kinds of radiological accidents.

COMPETENCY
AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL
OF EFFORT: 4 hours

REFERENCES: RTM-96, Response Technical Manual

EVALUATION
CRITERIA: At the completion of reviewing this document, you should be able to:

1. Discuss the steps used when conducting a Reactor Core Damage Assessment.
2. Discuss the steps used in each methodology when conducting a Classification Assessment.
3. Discuss the steps used when conducting a Reactor Accident Consequence Assessment.
4. Discuss the steps used when conducting an Early Phase Protective Action Assessment.

TASKS:

1. Obtain copy of RTM-96
2. Read topics stated above (Sections A, B, C, and G)
3. Meet with supervisor or qualified EP inspector to discuss any questions and review the evaluation criteria.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-7

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-8) NUMARC/NESP-007, Methodology for Development of Emergency Action Levels

PURPOSE: The purpose of activity is to familiarize you with an alternate emergency action level scheme to NUREG-0654. The implementation of this alternate methodology provided a consistent standard of making emergency classifications within the industry.

COMPETENCY
AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL
OF EFFORT: 8 hours

REFERENCES: NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels"

10 CFR 50.47(b)(4)

10 CFR 50 Appendix E.IV.B

Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors"

EVALUATION
CRITERIA: At the completion of reviewing this document, you should be able to:

1. Discuss the different Initiating Condition Matrices: Abnormal Rad Levels/Radiological Effluent; Fission Product Barrier Degradation; Hazards and Other Conditions Affecting Plant Safety; and, System Malfunction. Include in the discussion, their relationship to symptom-, event-, and barrier-based grouping of Initiating Conditions and Emergency Action Levels.
2. Discuss format of the Emergency Action Levels. Include an explanation of the different sections (i.e., Initiating Condition, Mode Applicability, EAL & Basis), and their use/relationship when classifying an event.

TASKS:

1. Obtain copy of NUMARC/NESP-007
2. Read Executive Summary and Section 3.0
3. Become familiar with content and format of Section 5.0
4. Meet with supervisor or qualified EP inspector to discuss any questions and review the evaluation criteria.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-8

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-9) NUREG 0396, Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants

PURPOSE: The purpose of this activity is to acquaint you with the basis for Federal, State and local government emergency preparedness organizations to determine the appropriate degree of emergency response planning efforts in the environs of nuclear power plants. You will become familiar with the concept of generic Emergency Planning Zones as a basis for the planning of response actions and determining the radiological consequences offsite. This activity will be helpful in understanding the licensee's responsibilities to the offsite agencies and its role in the plume phase of a radiological event.

COMPETENCY AREAS: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 4 hours

REFERENCES 10 CFR 50.47(b)(5)
10 CFR 50.47(b)(10)
10 CFR Part 50, Appendix E, Section F.2.c.
EPA 400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents"
NUREG 0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants"

EVALUATION CRITERIA: At the completion of reviewing this document, you should be able to:

1. Define the emergency planning zone and its purpose.
2. Discuss how different meteorological scenarios (e.g. wind, rain, sun) can effect the dose assessment estimates.
3. Discuss the difference between the plume exposure phase and the ingestion phase of a radiological event.

TASKS:

1. Read NUREG 0396
2. Meet with the Regional Government Liaison to discuss offsite emergency response and the roles of FEMA, state and counties.

3. Meet with supervisor or qualified EP inspector to discuss any questions.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-9

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-10) NUREG/CR-5247, RASCAL User's Guide

PURPOSE: The Radiological Assessment System for Consequence Analysis (RASCAL) was developed for use during response to radiological emergencies. RASCAL is a software program used as the NRC's dose assessment model and is designed to perform dose assessment calculations and used as a comparison with EPA Protective Action Guidance, licensee dose assessment calculations and other health effects thresholds. Calculations generated from RASCAL will assist the NRC in evaluating the adequacy of the licensee's protective action recommendations to the State.

COMPETENCY
AREAS: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL
OF EFFORT 4 hours

REFERENCES: NUREG/CR-5247, RASCAL User's Guide

10 CFR 50.47(b)(10)

NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants"

RTM-96, Response Technical Manual

EVALUATION
CRITERIA: At the completion of reviewing this document, you should be able to:

1. Discuss the purpose of the RASCAL dose assessment model
2. Operate the model using various accident scenarios.
3. Interpret the data.

TASKS:

1. Receive hands-on instruction on how to operate the NRC dose assessment model (RASCAL).
2. Attend a training class for operating the NRC dose assessment model (RASCAL).
3. Meet with a qualified user to discuss any questions
4. Meet with supervisor or qualified EP inspector to discuss any questions.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-10

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-11) Emergency Preparedness Position (EPPOS) Papers

PURPOSE: To familiarize you with the context and purpose of each of the EPPOS.

COMPETENCY
AREAS:

INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL
OF EFFORT: 2 hours

- REFERENCES:
1. EPPOS No. 1, Applicable Deviations from App. 1 of NUREG 0654, Methodology for the Development of Emergency Action Levels (EALs)
 2. EPPOS No. 2, Timeliness of Classification of Emergency Conditions
 3. EPPOS No. 3, Requirement for Onshift Dose Assessment Capability
 4. EPPOS No. 5, Emergency Planning Information Provided to the Public
 5. 10 CFR 50.47(b)(4)
 6. 10 CFR 50.47(b)(10)
 7. 10 CFR 50.47(b)(5)

EVALUATION
CRITERIA:

At the completion of reviewing these papers, you should be able to:

Generally describe the context and purpose of the four papers.

- TASKS:
1. Read EPPOS 1, 2, 3, and 5
 2. Meet with supervisor or qualified EP inspector to discuss any questions.

DOCUMENTATION: Emergency Preparedness Proficiency Level Qualification Signature Card
Item ISA-EP-11

Emergency Preparedness Inspector Individual Study Activity

TOPIC: (ISA-EP-12) Emergency Preparedness Significance Determination Process

PURPOSE: The Significance Determination Process (SDP), as described in Manual Chapter 0609, aids NRC inspectors and staff in determining the safety significance of inspection findings, using risk insights when appropriate. The SDP determinations for inspection findings and the Performance Indicator information are combined for use in assessing licensee performance. Upon completion of this activity, you will be able to use the Significance Determination Process to determine the safety significance of an EP inspection finding.

COMPETENCY
AREAS: TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF
EFFORT: 8 hours

REFERENCES:

1. NRC Inspection Manual Chapter IMC-0609, "Significance Determination Process"
2. NRC Inspection Manual Chapter IMC-0611 "Power Reactor Inspection Reports",
3. NRC Inspection Manual Chapter IMC-0612, "Issue Screening"
4. NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines", Section 2.4, "EP Cornerstone"
5. 10 CFR50.47(b)
6. 10 CFR50 Appendix E

EVALUATION
CRITERIA: At the completion of this activity, you should be able to:

1. Identify the most risk significant Emergency Preparedness planning standards (RSPS) contained in 10 CFR50.47(b) and Appendix E.
2. Classify an inspection finding as an Actual Event Implementation Problem or a Failure to Meet Regulatory Requirement.
3. Verify the efficacy of the licensee efforts to correct weaknesses and deficiencies to ensure the EP Cornerstone Objective is met.
4. Disposition an inspection finding, using the EP SDP flow chart logic, into one of the following categories: green; white; yellow; or, red. Also, discuss the differences between the categories.

5. Discuss your role during the “Significance and Enforcement Review Process” as described in IMC-0609, Attachment 1.
6. Discuss the “Process for Appealing NRC Characterization of Inspection Findings (SDP appeal process)” as described in IMC-0609, Attachment 2.

TASKS:

1. Obtain a copy of NEI 99-02, Section 2.4, “Emergency Preparedness Cornerstone” and familiarize yourself with the EP performance indicators and their thresholds.
2. Obtain a copy of 10 CFR50.47(b) and Appendix E. Read all sections. In particular, become well-acquainted with the risk significant planning standards (RSPS): 10 CFR50.47(b)(4), (5), (9) and (10) and Appendix E, section IV B, C, D(1) and D(3).
3. Obtain a copy of IMC-0609 and read introduction and Appendix B. Become well-versed in the use of the EP SDP flow chart logic diagrams in Appendix B.
4. Obtain a copy of IMC-0612 and read for understanding the process to determine if an EP issue is suited for SDP analysis.
5. Obtain from your supervisor or a qualified senior emergency preparedness inspector three (3) actual EP inspection findings that have undergone the Significant Determination Process or three (3) EP SDP case studies and perform the following:
 - (a) Utilizing IMC-0612, determine whether each of the issues has sufficient significance to warrant SDP analysis and/or documentation.
 - (b) If you determine the issue warrants an SDP analysis, classify each as an Actual Event Implementation Problem or a Failure to Meet Regulatory Requirement per IMC-0609 Attachment B.
 - (c) Identify if the issue is a repeat weakness and/or deficiency and determine the efficacy of the licensee’s corrective action efforts.
 - (d) Utilizing IMC-0609, Attachment B, EP SDP flow chart logic, formulate an outcome as to the risk significance category (green, white, yellow or red) for each.
 - (e) Compare your conclusions with those provided by the actual findings or case studies.
 - (f) Discuss your results with your supervisor or a qualified senior emergency preparedness inspector.

6. Obtain a copy of IMC-0609 Attachment 1 and read for understanding your role during the “Significance and Enforcement Review Process”.
7. Obtain a copy of IMC-0609 Attachment 2 and read for understanding the “Process for Appealing NRC Characterization of Inspection Findings (SDP Appeal Process)”.
8. Whenever possible, attend a significance determination and enforcement review panel (SERP) related to this SDP. Discuss the rationale for the outcome/resolution of the panel with a qualified senior emergency preparedness inspector.
9. Meet with your supervisor or a qualified senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item
ISA-EP-12

Emergency Preparedness On-the-Job Activities
Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-1) Alert and Notification System Testing

PURPOSE: The offsite alert and notification system, generally consisting of outdoor sirens and/or tone alert radios, is risk significant because it is the primary means for notification of the general public to monitor emergency instructions. The reliability of the siren portion of these systems is routinely determined and reported to the Federal Emergency Management Agency (FEMA) and NRC as a performance indicator. Inspection Procedure (IP) 71114.02 provides guidance for ensuring that testing methods used by a licensee are sufficiently robust to provide consistently valid data. Upon completion of this activity, you will be able to use NRC and licensee information to evaluate the adequacy of licensee siren testing programs.

COMPETENCY
AREAS: TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF
EFFORT: 60 hours

- REFERENCES:
1. IP 71114.02, "Alert and Notification System Testing"
 2. Appendix 3, "Means for Providing Prompt Alerting and Notification of Response Organizations and the Population," to NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," dated November 1980
 3. FEMA REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," dated November 1985
 4. Licensee emergency plan
 5. Licensee procedures for the conduct of siren tests
 6. Licensee alert and notification system design reports
 7. Licensee system manuals for system components
 8. Licensee, offsite official, and FEMA correspondence pertaining to the initial installation and acceptance of the offsite siren system
 9. FEMA acceptance tests and reports for the initial acceptance of the offsite siren system
 10. Licensee corrective action documentation related to siren

functionality

EVALUATION
CRITERIA:

At the completion of this activity, you should be able to:

1. Describe Federal guidance for siren performance and testing
2. Describe typical configurations of licensee siren systems
3. Describe the systems that can be used as alternatives to outdoor sirens, with the circumstances in which their use may be appropriate
4. Determine whether a licensee's siren testing program is effective in testing important elements of the system
5. Determine whether a licensee's siren testing program is conducted in accordance with Federal guidance
6. Determine whether a licensee is appropriately identifying and correcting siren system problems, and whether siren problems are included in the licensee's corrective action program

TASKS:

1. Review IP 71114.02 to identify the attributes used to determine if a siren testing program is satisfactory.
2. Review NUREG-0654, Appendix 3, to become acquainted with the acceptable means of providing alert notifications to the general public
3. Review FEMA REP-10, Chapter 1, Appendixes 2 and 4, to become acquainted with the methods available for verifying the testing methods for sirens
4. At 3 sites determined by your supervisor, perform the following tasks under the guidance of a senior emergency preparedness inspector:
 - (a) Determine the overall characteristics and function of the [public] alert and notification system from the licensee's emergency plan. Determine the current testing periodicity and any related requirements.
 - (b) Review any current licensee commitments related to the: (a) notification system design, (b) notification system maintenance, (c) design of the testing methodology, (d) test frequency, and/or (e) reporting or archiving of test results. These commitments could be to the FEMA, NRC, or offsite Agencies.
 - (c) Obtain and briefly review vendor manuals describing the alert

and notification system configuration. For sirens, obtain an understanding of the siren sounding mechanism, control system, feedback system, and report outputs.

- (d) Obtain and review the original FEMA acceptance report for the alert and notification system. Obtain an understanding of the system configuration at the time of acceptance.
- (e) Determine whether significant hardware, software, or testing changes have been made to the alert and notification system since its installation. If changes have been made, determine whether commitments continue to be met. Note that some commitments may have existed at the time of system installation (15-20 years ago) and may not be currently tracked by the licensee. Determine whether the alert and notification system, as currently implemented, is correctly described in the emergency plan.
- (f) Obtain and review licensee procedures for testing the alert and notification system. Review results from a recent system test and from the most recent annual full-cycle test. For each type of test performed (silent, poll, growl, partial cycle, full cycle, or other, as appropriate), determine whether the tests are designed to provide positive indication of the reliability of the system. Discuss your conclusions with a senior emergency preparedness inspector.
- (g) Review licensee procedures for preventive maintenance, work orders, maintenance records, and failures revealed through the testing program to determine the frequency of failures in the alert and notification system. Determine whether any common failure trends exist or whether components [sirens] fail at an unusual rate. Determine whether problems with the alert and notification system are captured in the licensee's corrective action program.
- (h) From the overall data, form a conclusion about whether the licensee's alert and notification system, as currently implemented, continues to meet planning standard provided in 10 CFR 50.47(b)(5) [refer to MC 0609, Appendix B, §5.5]. Discuss any concerns with a senior emergency preparedness inspector.
- (i) Observe 1 complete alert and notification system [siren] test conducted by means of computer telemetry and polling. Observe the actual activation and sounding of at least 1 siren.
- (j) Review an NRC inspection report that describes a finding and/or violation related to the design, testing, or implementation of the alert and notification system.

5. Meet with your supervisor or a qualified senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item OJT-EP-1.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-2) Emergency Response Organization Augmentation

PURPOSE: The licensee's emergency response organization augmentation system is a vital part of overall event response because of the critical need to relieve the control room of the emergency response functions unrelated to combating a plant event. The additional personnel and capabilities available in emergency response facilities (i.e., technical support center and emergency operations facility) may be needed for classified events or in other unusual circumstances. Augmentation systems typically consist of a combination of public address systems, pagers, automated phone dialing systems, and manual call trees. Inspection Procedure (IP) 71114.03 provides guidance for ensuring that the emergency response organization can be mobilized, as required, and that emergency plan goals for activating emergency response facilities can be achieved. Upon completion of this activity, you will be able to determine whether licensee augmentation goals can be achieved as described by the licensee's emergency plan.

COMPETENCY
AREAS: TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF
EFFORT: 40 hours

- REFERENCES:
1. IP 71114.03, "Emergency Response Organization Augmentation"
 2. Licensee emergency plan
 3. Licensee emergency plan implementing procedures for performing emergency response organization notification and emergency response facility activation (may include control room response procedures); primary and back-up methods may be addressed in separate procedures
 4. Design or bid specifications for automated telephone system or other automatic notification systems
 5. Vendor manuals for telephone auto-dial or other automatic notification systems
 6. Licensee drill records (including drill critiques) for pager tests, emergency response organization call-in drills, and/or drive-in drills
 7. Licensee corrective action system documentation related to activation of the emergency response augmentation staff

EVALUATION

CRITERIA:

At the completion of this activity, you should be able to:

1. Describe the functions or capabilities that the on-shift emergency response organization is required to implement
2. Describe the functions or capabilities for augmenting the on-shift organization, including the basis in regulation or guidance
3. Describe regulatory requirements for conducting augmentation drills
4. Describe the components or methods that are used in on-site and off-site augmentation systems
5. Describe the attributes that you used to conclude that a licensee's system for augmentation will support augmentation of the emergency response organization in accordance with the licensee's activation goals

TASKS:

1. Review IP 71114.03 to identify the attributes for determining the various methods available for determining if an emergency response augmentation plan is acceptable.
2. At 3 sites determined by your supervisor, perform the following tasks under the guidance of a senior emergency preparedness inspector:
 - (a) Determine the licensee's staffing commitments from the emergency plan and implementing procedures. This should include the positions to be staffed and related emergency response facility activation goals.
 - (b) Review licensee procedures for implementing primary and backup methods for augmenting the on-shift emergency response organization.
 - (c) Obtain a current licensee emergency response roster. Compare the roster against the positions listed in the emergency plan. Determine whether the licensee has sufficient depth in all key positions (as tracked for the emergency preparedness performance indicators) to ensure an adequate response. Discuss your conclusions with a senior emergency preparedness inspector.
 - (d) Obtain vendor manuals describing an automated augmentation system. Briefly review the system overview and description.
 - (e) Select a sample of approximately 10 percent of the licensee's key positions. Review licensee data on the expected off-hours response times for these key positions. Determine whether

the selected key individuals could reasonably be expected to respond to their assigned emergency response facilities within the activation time goals for those facilities.

For each selected key individual consider: (1) the time necessary to activate the augmentation method (including any delay in the control room to perform other higher-priority functions), (2) the time used in implementing the augmentation method, (3) the distance required to be traveled by the individual, (4) the average travel speed, (5) the time required to report to the facility after arrival on-site (including time spent at the security gate), and (6) other relevant factors. Discuss your conclusions with a senior emergency preparedness inspector.

- (f) Review the staffing of emergency response facilities during any declared emergency classifications during the current inspection period. Obtain the following items: (1) shift and responder logs (especially from the control room), (2) off-site and on-site notification worksheets, (3) completed procedures and/or attachments, and (4) communication logs or other relevant material.

Determine whether emergency response facility staffing goal times were met. Determine whether the data suggests that problems in implementation occurred. If concerns are noted, determine whether problems were appropriately captured in the licensee's corrective action program. Discuss your concerns with a senior emergency preparedness inspector.

- (g) Review the licensee's procedure for conducting drills or surveillances of the augmentation system. Obtain and review the results of 2 call-in or drive-in drills conducted by the licensee. In addition, if the licensee performs surveillances of their backup augmentation method, obtain the results of 1 such surveillance.

Determine if: (a) the design of the surveillance method reasonably tests the augmentation system, (b) the surveillance results indicate that staffing goal times can reliably be met, and (c) implementation problems occurred. If concerns are noted, determine whether problems were appropriately captured in the licensee's corrective action program. Discuss your conclusions with a senior emergency preparedness inspector.

- (h) Determine whether the integrated augmentation system, including provision for backup methods, is adequate to meet emergency response facility staffing goals [times]. Discuss your conclusions with a senior emergency preparedness inspector.

3. Meet with your supervisor or a qualified senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item OJT-EP-2.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-3) Emergency Action Level and Emergency Plan Changes

PURPOSE: Licensee emergency plans provide a description of the personnel, facilities, activities, and methods used to respond to an emergency condition at the licensee's facility. They also describe the regulatory commitments made by the licensee to the NRC. Emergency action levels provide entry criteria for classifying emergency conditions based on measurable or observable conditions. Standards for contents of emergency plans and emergency action levels are found in NRC regulations and other documents. Licensees are permitted to make changes to their emergency plan and emergency action levels as described by 10 CFR 50.54(q). Upon completion of this activity, you will be able to determine whether licensee emergency plan changes are in accordance with the requirements of 10 CFR 50.54(q).

COMPETENCY
AREAS: TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF
EFFORT: 50 hours

- REFERENCES: 1. Inspection Procedure (IP) 71114.04, "Emergency Action Level and Emergency Plan Changes"
2. NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," (I) Introduction; (II) Planning Standards and Evaluation Criteria; and Appendix 1: "Emergency Action Level Guidelines for Nuclear Power Plants"
 3. EPA 400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," dated May 1992
 4. Information Notice 83-28, "Criteria for Protective Action Recommendations for General Emergencies"
 5. Supplement 3, "Criteria for Protective Action Recommendations for Severe Accidents," to NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," dated July 1996
 6. NUMARC/NESP-007, Revision 2, "Methodology for Development of Emergency Action Levels," dated January 1992
 7. NEI 99-01, Revision 4, "Methodology for Development of Emergency Action Levels," dated May 1999

8. EPPOS No. 1, "Emergency Preparedness Position on Acceptable Deviations from Appendix 1 of NUREG-0654" based upon the staff's regulatory analysis of NUMARC/NESP-007, "Methodology for Development of Emergency Action Levels"
9. EPPOS No. 4, "Emergency Preparedness Position on Emergency Plan and Implementing Procedure Changes," dated November 1998
10. Licensee emergency plan
11. Licensee procedures for evaluating and making changes to the emergency action levels and the emergency plan, including methods for making determinations of compliance with 50.54(q) and for evaluating potential **reductions** of effectiveness of the emergency plan and implementing procedures
12. 10 CFR Part 50, Appendix E
13. 10 CFR 50.54(q)

**EVALUATION
CRITERIA:**

At the completion of this activity, you should be able to:

1. Describe the inspection requirements for an in-depth review of emergency action level and emergency plan changes that have been submitted to the NRC
2. Describe what is meant by a "**reduction** in effectiveness" of the emergency plan, emergency action levels, and emergency plan implementing procedures
3. Describe the regulatory requirements for licensees to make and implement changes to their emergency plan and/or emergency action levels
4. Describe where to find regulatory requirements for the contents of emergency plans and procedures and where to find regulatory guidance
5. Review a submitted emergency plan change and determine whether the change requires an in-depth review
6. Review a submitted emergency plan or emergency action level change to determine if the change results in a **reduction** in effectiveness of the emergency plan

TASKS:

1. Review IP 71114.04 to identify the attributes used to determine if a change to an emergency plan or emergency action level constitutes a **reduction** in effectiveness
2. Become familiar with the content of the following emergency action

level basis documents: (a) NUREG-0654, Sections (I), (II), and Appendix 1; (b) NUMARC/NESP-007; (c) NEI 99-01, Revision 4; and (d) EPPOS No. 1.

3. Become familiar with the content of the following guidance documents for the development of protective action recommendations: (a) EPA 400-R-92-001, Chapters 1, 2, and 5; (b) Information Notice 83-28; and (c) NUREG-0654, Supplement 3.
4. Become familiar with the contents of EPPOS No. 4.
5. Review 5 significant licensee submissions of changes to licensee emergency action levels that have been implemented under the provisions of 10 CFR 50.54(q) [see EPPOS 4]. The selected submissions should represent at least 3 different licensee sites. The licensee sites should represent both pressurized water and boiling water reactor sites, and 2 of the selected submissions should be previously unreviewed by the NRC.

For each submission, perform the following tasks under the guidance of a senior emergency preparedness inspector:

- (a) Determine whether the submission was made within 30 days of implementation of the emergency action level change as required by 10 CFR Part 50, Appendix E,
 - (b) Determine whether the basis for licensee emergency action levels is NUREG-0654 or NUMARC/NESP-007 (as revised).
 - (c) Determine whether the changes eliminated or changed any licensee commitments.
 - (d) Determine whether the changes continue to meet the requirements of the applicable basis document (NUREG-0654 or NUMARC/NESP-007).
 - (e) Determine whether the changes constitute a **reduction** in the effectiveness of the emergency plan. Discuss your conclusions with a senior emergency preparedness inspector.
 - (f) Discuss with a senior emergency preparedness inspector, the differences between a significant change to a licensee's emergency plan (which is required to be reviewed) and one which is not significant. List the circumstances under which an emergency plan change might not be reviewed by the NRC.
6. Obtain 5 licensee submissions of changes to the emergency plan that have been implemented under the provisions of 10 CFR 50.54(q). The selected submissions should represent at least 3 different licensee sites; at least 2 of the selected submissions should be currently unreviewed.

For each submission perform the following tasks at each under the guidance of a senior emergency preparedness inspector:

- (a) Determine whether the submission was made within 30 days of implementation of the emergency plan change as required by 10 CFR Part 50, Appendix E,
 - (b) Determine whether the change eliminated or changed any licensee commitments.
 - (c) Determine whether the change continues to meet the requirements of 10 CFR 50.54(q), 10 CFR 50.47(b), and 10 CFR Part 50, Appendix E.
 - (d) Determine whether the change constitutes a **reduction** in effectiveness of the emergency plan. Discuss your conclusions with a senior emergency preparedness inspector.
- 7. Obtain and review one NRC inspection report that identifies licensee changes to emergency action levels and/or the emergency plans that were determined to be a **reduction** in the effectiveness of the emergency plan. Review any associated notices of violation and the licensee's corrective action.
 - 8. Obtain and review one NRC inspection report that documents the inspection of changes to a licensee's emergency action levels or emergency plan.
 - 9. Meet with your supervisor or a senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item OJT-EP-3.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-4) Correction of Emergency Preparedness Weaknesses and Deficiencies

PURPOSE: Licensees are required to identify and correct weaknesses and deficiencies discovered through their emergency drill and exercise program. They are also required to conduct formal critiques in conjunction with all training activities and to correct any identified deficiencies. In a broader context, the licensee's ability to identify and resolve programmatic, procedural, training, and facility problems is a key component of the emergency preparedness cornerstone of the reactor oversight program. Upon completion of this activity, you should be able to evaluate the overall ability of a licensee to identify and correct problems related to their emergency preparedness program.

COMPETENCY AREA: TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF EFFORT: 40 hours

REFERENCES:

1. Inspection Procedure (IP) 71114.05, "Correction of Emergency Preparedness Weaknesses and Deficiencies"
2. NUREG-0696, "Functional Criteria for Emergency Response Facilities"
3. NUREG-0737, Supplement 1, "Clarification of TMI Action Plan Requirements for Emergency Response Capability," dated January 1983
4. NUREG-0814, (Draft) "Methodology for Evaluation of Emergency Response Facilities," dated August 1981
5. Licensee procedure for the corrective action program
6. Summaries of corrective action program activity and individual records of corrective action entries

EVALUATION CRITERIA: At the completion of this activity, you should be able to:

1. Describe the licensee documents that may contain information about problems that have been identified emergency preparedness weaknesses and deficiencies
2. Describe emergency preparedness regulatory requirements for the identification and resolution of problems, weaknesses, and deficiencies

3. Identify trends in licensee performance regarding its corrective action documentation
4. Identify instances, or give examples, where a licensee failed to appropriately capture an issue in its corrective action program
5. Describe the method(s) for verifying the effectiveness of corrective actions taken by the licensee
6. Summarize for your supervisor, the overall effectiveness of a licensee's corrective action program as it pertains to emergency preparedness following a review of corrective action program documentation

- TASKS:
1. Read IP 71114.05 to identify the attributes provided for inspection of a corrective action program for emergency preparedness weaknesses and deficiencies.
 2. Become familiar with the following NRC guidance documents: (a) NUREG-0696, (b) NUREG-0737, and (c) NUREG-0814.
 3. For 3 licensee sites determined by your supervisor, perform the following tasks under the guidance of a senior emergency preparedness inspector:
 - (a) Obtain and review the licensee's site-wide or overall procedure for the corrective action program. Determine how (whether) emergency preparedness is included in the corrective action program. Review how emergency preparedness issues are prioritized by the procedure.
 - (b) Obtain and review a summary list of issues related to emergency preparedness that have been entered into the licensee's corrective action program since the previous inspection. Determine whether the data contains trends in any of the areas listed in IP 71114.05, Sections 3.04 and 3.05. Discuss your conclusions with a senior emergency preparedness inspector.
 - (c) Review documentation associated with an actual emergency classification (Notice of Unusual Event or greater) made at a licensee site. Determine whether documentation was sufficiently detailed to support independent conclusions concerning the following: (a) whether the classifications and offsite notifications were correctly performed, and (b) whether problems were associated with implementation of the emergency plan during the events. Determine whether negative performance or program issues identified in the documentation, which meet the appropriate threshold, were

captured in the corrective action program. Discuss your conclusions with a senior emergency preparedness inspector.

- (d) Obtain and review the most recent 10 CFR 50.54(t) audit. Determine whether it was conducted in accordance with emergency plan requirements and commitments. Determine whether off-site agencies were provided the results and conclusions. Determine whether performance or program issues identified in the audit, which meet the appropriate threshold, were captured in the corrective action program.
 - (e) Obtain and review 1 additional audit or self-assessment of the emergency preparedness program. Determine whether performance or program issues identified in the audit, which meet the appropriate threshold, were captured in the corrective action program.
 - (f) Obtain and review the final report for an emergency drill conducted during the inspection cycle in which the emergency response facilities were activated. Review all of the following that are available for the same emergency drill: (a) drill scenario, (b) participant and evaluator logs, (c) offsite notification forms or worksheets, (d) dose projections, (e) environmental monitoring team records, (f) significant event logs, (g) participant worksheets, and (h) post-drill critique notes and comment forms. Determine whether all performance or program issues that were revealed in the documentation were appropriately captured in the licensee's report and corrective action program. Discuss your conclusions with a senior emergency preparedness inspector.
 - (g) At each site, select 3 corrective actions associated with a declared emergency and obtain the detailed corrective action descriptions. Use IP 71114.05, Sections 3.04 and 3.05, as a guide for selection of the corrective action documents to review. Verify the completion of each corrective action through direct observation. Not more than 1 of the selected corrective actions should be verified solely through documentation review.
 - (h) Select at least 5 additional completed corrective actions from the summary list provided in IP 71114.05, Sections 3.04 and 3.05. Obtain the detailed corrective action description and verify the completion of each corrective action through direct observation. Not more than 2 of the selected corrective actions should be verified solely through a documentation review.
4. Meet with your supervisor or a senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation

criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item
OJT-EP-4.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-5) Performance Indicator Verification

PURPOSE: The performance indicators (PI) collectively measure aspects of emergency preparedness performance. These indicators are significant in evaluating the overall quality of the program and are measurable without introducing an unreasonable administrative burden on the licensee. The administration of the PI program is completely within the licensee's responsibility as a major component of the reactor oversight program. To protect the integrity of the program, provide consistency in the process, and provide assurance to management that data is accurate, NRC inspectors periodically verify the data reported by licensees.

NOTE: This OJT activity must be completed before completing the following OJT activities:
(1) Performance Indicator Verification: Drill and Exercise Performance,
(2) Performance Indicator Verification: Emergency Response Organization Drill Participation, and (3) Performance Indicator Verification: Alert and Notification System

COMPETENCY
AREA: TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF
EFFORT: 24 hours

REFERENCES:

1. NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines"
2. Regulatory Issue Summary 2001-11
3. Emergency Preparedness Performance Indicator "Frequently Asked Questions" (FAQ)
4. Manual Chapter (MC) 0608, "Performance Indicator Program"
5. MC 0801, "Program Feedback"
6. Inspection Procedure (IP) 71150, "Discrepant or Unreported PI Data"
7. IP 71151, "Performance Indicator Verification"
8. 10 CFR 50.9

EVALUATION
CRITERIA: The following evaluation criteria apply to the verification of all emergency preparedness PIs. At the completion of this activity, you should be able to:

1. Describe where to find guidance related to the implementation of the each PI.
2. Describe the frequently asked question process, including its relationship to published guidance and circumstances and where it would be appropriate for an inspector to use the process.
3. Demonstrate how to locate frequently asked questions using the internal NRC web page and/or other means.
4. View and print emergency preparedness PI data submitted to the NRC.
5. Describe the criteria for identifying a finding with respect to errors in a licensee's reported PI data.

TASKS:

1. Become familiar with MC 0608, "Performance Indicator Program" and MC 0801, "Program Feedback."
2. Review IPs 71151 and 71150 to identify the inspection attributes provided for verification of PIs. Discuss any questions with a senior emergency preparedness inspector.
3. Become familiar with NEI 99-02, Section 2.4 "Emergency Preparedness Cornerstone." Discuss any questions with a senior emergency preparedness inspector.
4. Access the "Plant Assessment Results" web page on the ROP Digital City web page.
 - (a) Review for information, the status of plants in your Region as listed in the Action Matrix Summary
 - (b) For 2 reactor sites located in your region, as designated by your supervisor, obtain the current emergency preparedness PI status through each of the following methods:
 - (i) Using the "PI Summary" link at the top of the web page, double-click on one of the PI windows for the selected site (EP1-DEP, EP2-ERO, or EP3-ANS).
 - (ii) Using the "PI Summary" link at the top of the web page, follow the plant name link (in the left-side column). From the plant performance summary, scroll down to the PI status. Click on one of the emergency preparedness windows to display the associated PI data.
 - (iii) From the ROP Plant Assessment Results Page, open the plant performance summary page by selecting the

alphabetical listing followed by the plant name and selecting the appropriate regional plant listing followed by the plant name.

- (iv) Print from the web page, the emergency preparedness PIs for 1 reactor site located within your region, as designated by your supervisor.
 - (c) For 1 plant in your region designated by your supervisor, compare the PI data tables displayed with each of the 3 emergency preparedness PIs for the number of calendar quarters used to compute the statistic per NEI 99-02. Note any differences.
 - (d) From the Plant Assessment Results web page, page-down to the section on "Frequently Asked Questions (FAQ)." View the current emergency preparedness FAQs by clicking on the link labeled "cornerstone/PI." Scroll to locate and view the appropriate questions. View current draft (incomplete) emergency preparedness FAQs by clicking on the link labeled "Draft FAQs."
- 5. From the ROP Digital City web page, scroll to the block labeled "ROP Feedback Process." Follow the link "Open Feedback Forms by Region." Review the topics which are currently open. [Since this section is not organized by procedure or PI, a review of feedback from all regions is required to identify all emergency preparedness issues].
 - 6. Discuss with your supervisor or a senior emergency preparedness inspector, the current NRC enforcement guidelines with respect to applying 10 CFR 50.9 (inaccurate information) to the reporting of PI data.
 - 7. Meet with your supervisor or a senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item OJT-EP-5.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-6) Performance Indicator Verification: Drill and Exercise Performance

PURPOSE: The drill and exercise performance indicator (PI) measures the ability of the licensee's emergency response organization to perform the risk significant tasks of emergency classification, protective action recommendations, and the associated notifications to off-site authorities. These activities are critical because they have a direct impact on the protection of the public during an emergency. Licensees perform self-assessments of their performance and the NRC annually verifies the adequacy of the licensee's assessment. Upon completion of this activity, you should be able to evaluate licensee performance documentation and determine whether available documentation is sufficient to validate licensee conclusions.

NOTE: Completion of OJT-EP-5, Performance Indicator Verification, is a prerequisite for this activity.

COMPETENCY
AREA:

TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF
EFFORT:

24 hours

REFERENCES:

1. IP 71151, "Performance Indicator Verification"
2. NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines"
3. Regulatory Issue Summary 2001-11
4. Emergency Preparedness Performance Indicator "Frequently Asked Questions" (FAQ)
5. Licensee Emergency Action Levels and procedures for classifying an emergency condition for the facility designated by your supervisor
6. Licensee procedures for developing protective action recommendations for the facility designated by your supervisor
7. NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Supplement 3, "Criteria for Protective Action Recommendations for Severe Accidents," dated July 1996
8. EPA 400-R-92-001, "Manual of Protective Action Guides and

Protective Actions for Nuclear Incidents,” dated May 1992

9. Licensee procedures for performing offsite notifications of an emergency condition (including protective action recommendations) for the facility designated by your supervisor
10. Licensee procedures for the collection, processing, analysis, reporting, and archiving performance indicator information for the facility designated by your supervisor
11. Licensee performance indicator reports to the NRC for the facility designated by your supervisor

**EVALUATION
CRITERIA:**

At the completion of this activity, you should be able to:

1. Define an “opportunity” as it relates to drill and exercise performance
2. Define the timeliness goals applied to the following: (a) classifying an emergency condition, (b) determining a protective action, and (c) notifying offsite authorities of a change in either emergency classification or protective action recommendations
3. Define “accurate” as applied to the following: (a) classifying an emergency condition, (b) determining a protective action, and (c) notifying offsite authorities of a change in either emergency classification or protective action recommendations
4. Describe where the “as expected” or “as designed” outcome of each opportunity can be located
5. Describe the type of documentation that is necessary to validate a licensee’s determination of success or failure for each of the following: (a) classifying an emergency condition, (b) determining a protective action, and (c) notifying offsite authorities of a change in either emergency classification or protective action recommendations
6. Determine whether a licensee’s evaluation of the timeliness and accuracy of an opportunity was correctly decided
7. Perform the drill and exercise performance indicator calculation

TASKS:

For 3 sites within your region, as designated by your supervisor, perform the following tasks under the guidance of a senior emergency preparedness inspector:

1. Review licensee procedures for collecting and reporting performance indicators. (These procedures may include separate site-wide and departmental procedures.)

2. Select 5 emergency drills conducted during the current inspection cycle that were evaluated for drill and exercise performance and perform a detailed review. At least 2 of the selected emergency drills must involve activation of licensee emergency response facilities.
3. Obtain and review the scenarios used to conduct the emergency drills. Identify the intended opportunities for emergency classification and for development of protective action recommendations (PAR). Identify the intended results including the emergency action levels (EAL) to be used to classify and the PAR(s) expected to be transmitted. Evaluate whether the scenario contained sufficient information to clearly establish expectations in these areas. (Some discussion with licensee staff may be required to understand prior expectations.) Discuss your conclusions with a senior emergency preparedness inspector.
4. Review the documentation associated with each emergency drill.
 - (a) Determine for each classification that was actually made whether: (a) the classifications were made in a timely manner, (b) the classifications were made in an accurate manner [at the correct emergency classification level, with EALs that were correct for the data available], and (c) the classifications were accurately communicated to off-site agencies. Apply the definition of “accurate” that was in effect during the calendar quarter in which the emergency drill occurred and evaluate all aspects of “accurate.” Note instances where the data did not permit a definite determination. Discuss your conclusions with a senior emergency preparedness inspector.
 - (b) Determine for each PAR action that was actually transmitted whether the PARs were: (a) timely, (b) accurate (according to licensee procedures), and (c) accurately communicated to offsite agencies. Apply the definition of “accurate” that was in effect during the calendar quarter in which the emergency drill occurred and evaluate all aspects of “accurate.” Note instances where the data did not permit a definite determination. Discuss your conclusions with a senior emergency preparedness inspector.
 - (c) Determine whether the scenario and/or documentation suggested any opportunities which were not recognized by the emergency drill participants.
 - (d) For each classification or PAR that was not intended by the scenario, determine whether the licensee’s documentation was sufficiently detailed to evaluate whether the licensee correctly assigned a success or failure to the opportunity. Discuss your conclusions with a senior emergency

preparedness inspector.

5. After reviewing the scenario and associated documentation, independently score the number of opportunities, successes, and failures for each emergency drill. Compare your score with that reported to the NRC by the licensee and note any differences. Discuss your conclusions with a senior emergency preparedness inspector.
6. Meet with your supervisor or a senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item OJT-EP-6.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-7) Performance Indicator Verification: Emergency Response Organization Drill Participation

PURPOSE: The emergency response organization participation performance indicator measures whether persons holding key response positions maintain a minimum drill participation frequency of 2 years. Regular drill and exercise participation by key members of the emergency response organization maintains their proficiency in the risk significant functions of emergency classification, protective action recommendations development, and their associated notifications to offsite authorities. The regular conduct of emergency drills and exercises also supports the continuous identification and resolution of problems. Inspectors annually verify the reported participation frequency of key responders. Upon completion of this activity, you will be able to evaluate licensee participation documentation and determine whether the documentation is sufficient to validate reported licensee data.

Note: OJT-EP-5, Performance Indicator Verification and OJT-EP-6, Performance Indicator Verification: Drill and Exercise Performance must be completed before this OJT activity.

COMPETENCY

AREA: TECHNICAL AREA EXPERTISE
INSPECTION

LEVEL OF
EFFORT: 24 hours

REFERENCES:

1. Inspection Procedure (IP) 71151, "Performance Indicator Verification"
2. NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines"
3. Regulatory Issue Summary 2001-11
4. Emergency Preparedness Performance Indicator "Frequently Asked Questions" (FAQ)
5. List of key emergency response organization positions identified by the licensee for a facility designated by your supervisor
6. Licensee rosters for identified key emergency response organization positions for a facility designated by your supervisor
7. Licensee procedures for the collection, processing, analysis, reporting, and archiving performance indicator information for a facility designated by your supervisor

8. Licensee performance indicator reports to the NRC for a facility designated by your supervisor

**EVALUATION
CRITERIA:**

At the completion of this activity, you should be able to:

1. Describe the linkage between the drill and exercise performance indicator and emergency response organization participation performance indicator (PI)
2. Describe the key positions in a licensee's emergency response organization
3. Describe the type of licensee documents that are required to validate emergency response organization participation for key individuals
4. Determine whether a licensee's evaluation of drill participation for an individual in a key emergency response organization position was correctly decided
5. Perform the emergency response organization participation performance indicator calculation

TASKS:

For 3 reactor sites within your region, as designated by your supervisor, perform the following activities for each site under the guidance of a senior emergency preparedness inspector:

1. Review licensee procedures for collecting and reporting PIs. (These procedures may include separate site-wide and departmental procedures.)
2. Determine from licensee procedures the list of "key" emergency response positions that are tracked for PI purposes.
3. Select 2 calendar quarters within the inspection cycle. For each selected calendar quarter:
 - (a) Obtain the end-of-quarter roster used to prepare PI data for the calendar quarter.
 - (b) Determine the most recent emergency drill participation date for each key participant on the roster [as reflected in the licensee's computer data bases or other records]. If the licensee maintains a listing of key individuals and their participation dates separate from the overall roster, determine whether all key individuals appearing on the roster also appear on the separate list.
 - (c) Flag each individual who does not have a participation date within the previous 8 calendar quarters. Sum the number of

such individuals and calculate a ratio of the sum to the total number of key personnel.

- (d) Compare the ratio you have calculated to the ratio the licensee reported to the NRC. Note any differences and discuss them with a senior emergency preparedness inspector.
 - (e) Select a sample of about 5 percent of the key individuals or a sample of not less than 3 persons, whichever is larger. Obtain original signature documents or accurate copies of such originals to verify the drill participation of the selected individuals on the dates listed in the licensee's data base. Only the most recent date is required to be verified.
4. Meet with your supervisor or a senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item OJT-EP-7.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-8) Performance Indicator Verification: Alert and Notification System Reliability

PURPOSE: The offsite alert and notification system is considered risk significant because it is the primary means by which the population becomes aware of a need to monitor emergency instructions. The reliability of the siren portion of these systems is routinely determined by the licensee and is reported to the NRC as a performance indicator. Inspectors annually verify the accuracy of the reported siren reliability. Upon completion of this activity, you will be able to evaluate licensee siren test documentation and determine whether the documentation is sufficient to validate reported licensee data.

Note: OJT-EP-5, Performance Indicator Verification and OJT-EP-6, Performance Indicator Verification: Drill and Exercise Performance must be completed before beginning this OJT activity.

**COMPETENCY
AREA:**

TECHNICAL AREA EXPERTISE
INSPECTION

**LEVEL OF
EFFORT:**

24 hours

REFERENCES:

1. Inspection Procedure 71151, "Performance Indicator Verification"
2. NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines"
3. Regulatory Issue Summary 2001-11
4. Emergency Preparedness Performance Indicator "Frequently Asked Questions" (FAQ)
5. Licensee procedures for siren testing at the facility designated by your supervisor
6. Direct data collected during licensee siren tests may include some or all of the following: (a) computer tables or lists, (b) summary computer reports, (c) individual siren reports, or (d) individual evaluator worksheets, at the facility designated by your supervisor
7. Licensee out-of-service and maintenance records for sirens at the facility designated by your supervisor
8. Licensee procedures for the collection, processing, analysis, reporting, and archiving performance indicator information at the

facility designated by your supervisor

9. Licensee performance indicator (PI) reports to the NRC at the facility designated by your supervisor

**EVALUATION
CRITERIA:**

At the completion of this activity, you should be able to:

1. Describe the siren tests or activation opportunities that are included in the siren reliability performance indicator
2. Describe the type of licensee documents that are required to validate siren reliability
3. Determine whether a licensee's evaluation of reliability for an individual siren was correctly decided
4. Perform the siren reliability performance indicator calculation

TASKS:

For 3 reactor sites within your region designated by your supervisor, perform the following for each site under the guidance of a senior emergency preparedness inspector:

1. Review licensee procedures for collecting and reporting PIs. (The procedures may include separate site-wide and departmental procedures.)
2. Review licensee commitments related to the frequency of alert and notification testing contained in the emergency plan. Determine the expected frequency of tests which are counted towards the PI.
3. Review licensee procedures for conducting alert and notification system (siren) tests. Determine from the procedures, discussions with licensee staff, and/or other documentation, how successes and failures are indicated on the testing documentation.
4. Select 2 calendar quarters within the inspection cycle. For each calendar quarter:
 - (a) For each scheduled testing date during the calendar quarter, obtain the original data that was collected or created by the test (or accurate copies of this data).
 - (b) For each scheduled testing date, review the raw data for each individual siren. Determine whether according to licensee procedures the data indicates a success, a failure, or is indeterminate.
 - (c) Flag each indicated failure or indeterminate test result. Total the number of indicated successes for each testing date. Total the number of indicated successes for the calendar quarter.

- (d) Calculate the ratio of successes to the total number of sirens tested according to your review of the data. Compare this ratio to the ratio reported by the licensee to the NRC. Discuss any differences with a senior emergency preparedness inspector.
- 5. Meet with your supervisor or a senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Emergency Preparedness Inspector Qualification Signature Card, Item OJT-EP-8.

Emergency Preparedness Inspector On-the-Job Activity

TOPIC: (OJT-EP-9) Emergency Drill/Exercise Evaluation

PURPOSE: The conduct of an emergency drill/exercise allows the licensee to test and assess its emergency responders' performances and to identify and correct identified concerns. Root causes of identified performance concerns may involve factors such as: emergency response training, emergency plan implementing procedures, response facility and equipment readiness, personnel performance, organizational and management changes, or equipment operability. Upon completion of this activity, you will be able to evaluate the adequacy of a licensee's capability to conduct an emergency drill/exercise and adequately critique its participants' performances.

COMPETENCY
AREAS: INSPECTION

LEVEL OF
EFFORT: 40 hours

REFERENCES: IP 71114.01, "Exercise Evaluation"
IP 71114.06, "Drill Evaluation"
10 CFR50, Appendix E, Section IV.F
10 CFR50.47(b)
Licensee's drill/exercise objectives
Licensee's drill/exercise scenario manual
NEI 99-02, Section 2.4, "Emergency Preparedness Cornerstone"
IP 71151-03.01.h, "Performance Indicator Verification, Emergency Response Organization Drill/Exercise Performance (DEP)"

EVALUATION
CRITERIA: At the completion of this activity, you should be able to:

1. Review a designated licensee's drill/exercise objectives and scenario manual to determine if the drill/exercise will be an acceptable test of the licensee's Plan in accordance with 10 CFR50, Appendix E Section IV.F.2
2. Discuss NRC inspection procedures for drill/exercise observation and assessment of the licensee's critique process.
3. Independently assess drill/exercise participants' performances in areas such as: emergency classification; offsite agency notification;

Protective Action Recommendation (PAR) development and notification; command and control; development and implementation of a prioritized accident mitigation strategy; and other areas observed during the drill/exercise. Licensee drill/exercise performance should be evaluated during several exercises by an inspector in training in at least these locations: Control Room; Technical Support Center (TSC); Operations Support Center (OSC); and Emergency Operations Facility (EOF).

4. Determine if the planning standards of 10 CFR50.47(b) would be met as a result of independent observation of emergency drill/exercise performance.
5. Compare your independently identified performance concerns against the licensee's identified concerns to determine whether the licensee is properly identifying performance weaknesses and deficiencies, particularly with respect to the risk significant topics of emergency classification, notification, PAR development, and PAR notification.
6. Determine if the licensee's critique of drill/exercise performance is effective in identifying drill/exercise performance weaknesses and deficiencies, as well as concerns of lesser significance, for inclusion in its corrective action tracking system.
7. Compare the biennial exercise scenario's narrative summary and time line to those scenarios used by the licensee since the previous biennial exercise to determine if the biennial exercise is unacceptably similar to those previously used scenarios.
8. Identify trends in poor performance during an emergency drill/exercise that may represent failures to correct weaknesses and deficiencies identified during the time period beginning with the previous biennial exercise.
9. Determine if licensee has demonstrated the capability of providing reasonable assurance that adequate on-site and off-site protective measures can be taken in the event of a radiological emergency, or if a recommendation to NRC management should be made that the licensee conduct a remedial drill.

TASKS:

1. Review IP 71114.01, "Exercise Evaluation" and IP 71115.06, "Drill Evaluation" to identify the inspection attributes provided for drill/exercise performance evaluations. Discuss any questions with your supervisor or a designee, such as an emergency preparedness inspector.
2. Review NEI 99-02, Section 2.4, "Emergency Preparedness Cornerstone" to become familiar with the Drill/Exercise Performance (DEP) Indicator. Discuss any questions with your supervisor or designee.

3. Review the regulatory requirements with regard to an emergency drill/exercise contained within 10 CFR50.47(b)(14) and 10 CFR50, Appendix E, Section IV.F.
4. Become familiar with the content of IP 71151-03.01.h, "Performance Indicator Verification, Emergency Response Organization Drill/Exercise Performance (DEP).
5. Obtain the emergency preparedness drill/exercise schedule for the region or site. Coordinate your observation of upcoming emergency drills/exercises with your supervisor, regional emergency preparedness inspectors, and senior resident inspectors. Observe drill/exercise performances within at least these locations: Control Room, TSC, OSC, and EOF in order to obtain multiple perspectives of licensees' emergency response capabilities.
6. Become familiar with relevant portions of the licensee's Emergency Plan and Implementing Procedures. In particular, review those implementing procedures that provide instructions for classification, notification and PAR development to develop an understanding of successful implementation.
7. Review copies of the chosen emergency drill/exercise objectives and scenarios. Identify opportunities for classification, notification, and PAR development, and the licensee's criteria for determining performance success versus failure. Determine if each drill/exercise is a sufficient test of the Plan per 10 CFR50 Appendix E, Section IV.F.2. f. (If you suspect it is not a sufficient test, notify your supervisor or designee). Refer to IP 71114.01-03.01 Inspection Guidance.
8. Obtain and review a sample of identified weaknesses and deficiencies from the previously conducted biennial emergency exercise and become familiar with corrective actions taken. Identify opportunities for observation of repeat weaknesses and deficiencies. Refer to IP 71114.01-03.02 Inspection Guidance.
9. Perform an independent observation of licensee performance during the emergency drill/exercise. Refer to previously identified opportunities for classification, notification, PAR development, corrective actions, and other areas selected to aid in prioritizing observations. Do not interfere with the licensee's drill/exercise participants. Do not "prompt" licensee participants or evaluators, or voice your opinions of participants' performances during the drill/exercise. The NRC assessments must be held confidential until after the licensee's critique presentation to the inspectors.
10. Document instances when licensee controllers or evaluators "prompt" participants during the drill/exercise. Refer to IP 71114.01-03.03.

11. Obtain copies of checklists and forms used during drill/exercise performance with regard to classification, notification, PAR development, and PAR notification. Identify any failures.
12. Obtain records of other observed areas which you suspect to be weak or deficient. Identify if area indicates a programmatic problem to the point that a planning standard of 10 CFR50.47(b) may not be met.
13. Attend licensee evaluator meetings and critiques where exercise weaknesses and deficiencies are identified. Determine if the licensee's critique identified your observed performance concerns. In particular, identify if licensee correctly assessed classification, notification, PAR development and notification, corrective action failures, and other observed weak or deficient areas.
14. Verify that the licensee properly dispositions weaknesses and deficiencies with regards to performance indicator statistics and the site's corrective action program.
15. Provide your emergency drill/exercise observations and critique results to the lead inspector. Discuss your emergency drill/exercise observations with lead inspector and provide a recommendation on whether licensee demonstrated the capability of providing reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency, or if a remedial drill should be recommended to NRC management.
16. Meet with your supervisor or a qualified senior emergency preparedness inspector to discuss any questions that you may have as a result of this activity.

DOCUMENTATION: Emergency Preparedness Inspector Proficiency Level Qualification
Signature Card Item OJT-EP-9.

Emergency Preparedness Inspector Technical Proficiency Level Signature Card and Certification

Inspector Name: _____	Employee Initials/ Date	Supervisor's Signature/Date
A. Required Training Courses		
Power Plant Engineering (Self Study of selected chapters)		
(R-104B) GE Technology		
(R-104P) Westinghouse Technology		
(H-203) Emergency Preparedness Technology		
B. Individual Study Activities		
(ISA-EP-1) Code of Federal Regulations for Emergency Preparedness Inspectors		
(ISA-EP-2) Licensee Emergency Plan Documents		
(ISA-EP-3) Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness		
(ISA-EP-4) Functional Criteria for Emergency Response Facilities		
(ISA-EP-5) TMI Action Plan Requirements		
(ISA-EP-6) Manual of Protective Action Guides and Protective Actions for Nuclear Incidents		
(ISA-EP-7) RTM-96, Response Technical Manual		
(ISA-EP-8) NUMARC/NESP-007, Methodology for Development of Emergency Action Levels		
(ISA-EP-9) NUREG 0396, Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants		
(ISA-EP-10) NUREG/CR-5247, RASCAL User's Guide		
(ISA-EP-11) Emergency Preparedness Position (EPPOS) Papers		
(ISA-EP-12) Emergency Preparedness Significance Determination Process		
C. On-the-Job Training Activities		
(OJT-EP-1) Alert and Notification System Testing		
(OJT-EP-2) Emergency Response Organization Augmentation		
(OJT-EP-3) Emergency Action Level and Emergency Plan Changes		
(OJT-EP-4) Correction of Emergency Preparedness Weaknesses and Deficiencies		
(OJT-EP-5) Performance Indicator Verification		

(OJT-EP-6) Performance Indicator Verification: Drill and Exercise Performance		
(OJT-EP-7) Performance Indicator Verification: Emergency Response Organization Drill Participation		
(OJT-EP-8) Performance Indicator Verification: Alert and Notification System Reliability		
(OJT-EP-9) Emergency Drill/Exercise Evaluation		

Supervisor's Signature indicates successful completion of all required courses and activities listed in this journal and readiness to appear before the Oral Board.

Supervisor's Signature _____ Date: _____

This signature and certification must be accompanied by the appropriate Form 1, Emergency Preparedness Inspector Technical Proficiency Level Equivalency Justification, if applicable.

Form 1: Emergency Preparedness Inspector Technical Proficiency Level Equivalency Justification	
Inspector Name: _____	Identify equivalent training and experience for which the inspector is to be given credit
A. Training Courses	
Power Plant Engineering (Self Study of selected chapters)	
GE Technology (R-104B)	
Westinghouse Technology (R-104P)	
Emergency Preparedness Technology	
B. Individual Study Activities	
(ISA-EP-1) Code of Federal Regulations for Emergency Preparedness Inspectors	
(ISA-EP-2) Licensee Emergency Plan Documents	
(ISA-EP-3) Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness	
(ISA-EP-4) Functional Criteria for Emergency Response Facilities	
(ISA-EP-5) TMI Action Plan Requirements	
(ISA-EP-6) Manual of Protective Action Guides and Protective Actions for Nuclear Incidents	
(ISA-EP-7) RTM-96, Response Technical Manual	
(ISA-EP-8) NUMARC/NESP-007, Methodology for Development of Emergency Action Levels	
(ISA-EP-9) NUREG 0396, Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants	
(ISA-EP-10) NUREG/CR-5247, RASCAL User's Guide	
(ISA-EP-11) Emergency Preparedness Position (EPPOS) Papers	
(ISA-EP-12) Emergency Preparedness Significance Determination Process	
C. On-the-Job Training Activities	

(OJT-EP-1) Alert and Notification System Testing	
(OJT-EP-2) Emergency Response Organization Augmentation	
(OJT-EP-3) Emergency Action Level and Emergency Plan Changes	
(OJT-EP-4) Correction of Emergency Preparedness Weaknesses and Deficiencies	
(OJT-EP-5) Performance Indicator Verification	
(OJT-EP-6) Performance Indicator Verification: Drill and Exercise Performance	
(OJT-EP-7) Performance Indicator Verification: Emergency Response Organization Drill Participation	
(OJT-EP-8) Performance Indicator Verification: Alert and Notification System Reliability	
(OJT-EP-9) Emergency Drill/Exercise Evaluation	

Supervisor's Recommendation: Signature / Date: _____

Division Director's Approval: Signature / Date: _____

Copies to: Inspector
 HR Office
 Supervisor

Revision History Page for IMC 1245, Appendix C6

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Numbers (Pre-Decisional, Non-Public Information)
N/A	ML090370311 07/08/09 CN-09-017	Moves post-qualification and refresher training requirements out of the appendix and into Appendix D-1.	N/A	N/A
N/A	ML18047A183 08/23/18 CN 18-029	This revision accounts for the creation of IMC 0611, and also fixes some small reference issues.	N/A	ML18065A654 Closed FF: 1245C6-2265 ML18134A019