

NRC INSPECTION MANUAL

NMSS/DFM

INSPECTION MANUAL CHAPTER 1247 APPENDIX C3

FUEL FACILITY EMERGENCY PREPAREDNESS INSPECTOR TECHNICAL PROFICIENCY
TRAINING AND QUALIFICATION JOURNAL

Effective Date: 07/24/2024

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INTRODUCTION

Consult with your supervisor prior to beginning the activities or completing the courses in this qualification journal. **You** will need to complete the Basic Inspector Certification Journal prior to beginning the activities in this Appendix. You may complete the General Proficiency requirements contained in Appendix B together with the Technical Proficiency requirements outlined in this journal.

Several of the topics have both an individual study **activities** and on-the-job training. You must complete the individual study guide before beginning the corresponding on-the-job training.

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

REQUIRED EMERGENCY PREPAREDNESS INSPECTOR TRAINING COURSES

(These courses have the completion of Appendix A of **Inspection Manual Chapter (IMC) 1247** as a prerequisite)

- (F-206S) Fire Protection for Fuel Cycle Facilities Self-Study Course
- (H-309) Health Physics in Radiation Emergencies
- (H-107) Introduction to Emergency Preparedness Course
- (H-203) Emergency Preparedness Technology

REQUIRED REFRESHER TRAINING:

(To be completed every three years)

- (8 hours) OSHA HAZWOPER Refresher Course or TMS Health and Safety Training Suite as identified in Memorandum dated May 7, 2010, from Catherine Haney to NMSS Branch Chiefs (See ADAMS Accession No. ML100200563 for details of equivalent TMS training modules).
- (16 Hours) Refresher Technical Training Seminar as approved by supervisor

CONTINUING TRAINING:

(These classes are suggested for continuing training for inspectors, following completion of qualification and post-qualification training courses. You may propose alternate courses in additional topic areas to your supervisor.)

- Continuity of Operations: ERG and DERG Training - 2020
- Emergency and Disaster Preparedness (on-line via TMS)
- External Emergency Preparedness Training (See EP Community of Practice for Help with Suggestions)
- RASCAL, (see the Region II Emergency Response Coordinator)
- SAFER, (see the Region II Emergency Response Coordinator)
- (E-111) Emergency Diesel Generators Course
- (H-303) Radiological Emergency Response and Operations
- (H-320) Advanced Dose Assessment and PARs
- (H-321) Advanced EALS for EP Inspectors

- (H-323) Advanced EP Inspection Procedures
- (H-324) Advanced Concepts in Emergency Response Staffing & Facilities
- (H-402) Emergency Preparedness Special Topics

Fuel Facility Emergency Preparedness Inspector Individual Study Activities

(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 and the licensee's emergency management program. By ensuring that the site is in compliance with requirements in the *Code of Federal Regulations* (CFR), we can determine if the emergency management program is adequate and maintained in a state of readiness to protect workers, the public, and the environment.

COMPETENCY AREA: REGULATORY FRAMEWORK
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 8 hours

REFERENCES:

- 10 CFR Part 70.22, "Contents of Applications" Subsection (i)(3)
- 10 CFR Part 70.32, "Conditions of Licenses" Subsection (i)
- 10 CFR Part 40.31, "Application for Specific Licenses" Subsection (j)(3)
- 10 CFR Part 40.35, "Conditions of Specific Licenses Issued Pursuant to Subsection 40.34" Subsection (f)
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Rev. 2 (ML15176A258)

EVALUATION CRITERIA:

Upon completion of this SG, the inspector should be able to:

- Describe each of the emergency planning requirements for an emergency response plan.
- For an emergency response, discuss which emergency planning requirements are more risk significant.
- Explain the requirements for making changes to the Emergency Plans as presented in 10 CFR Part 40 and 10 CFR Part 70.
- Discuss the limits for exposure to the general public during an event (10 CFR 20.1301).

TASKS

- Review pertinent Sections of 10 CFR Part 40.31 and 10 CFR Part 70.22 to familiarize yourself with the information which must be contained in Emergency Plans.
- Review Section 8 of NUREG-1520 for contents of an Emergency Plan considered acceptable by license reviewers.
- Meet with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness Inspector to discuss any questions you may have as a result of these activities. Discuss the answers to the questions listed under the Evaluation Criteria Section of this study guide with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector.

DOCUMENTATION: Fuel Facility Emergency Preparedness Inspector Proficiency Level Qualification Signature Card, Item ISA-EP-1.

(ISA-EP-2) Preparation and Evaluation of Radiological Emergency Plans

PURPOSE:

The purpose of this activity is to familiarize you with the criteria used by NRC-licensed facilities to develop radiological Emergency Plans and improve emergency preparedness. Emergency Plans submitted under 10 CFR Parts 40 and 70 must include the emergency planning requirements listed in 10 CFR Parts 40.31 and 70.22.

COMPETENCY AREA: **REGULATORY FRAMEWORK**
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 16 hours

REFERENCES:

- Regulatory Guide (RG) 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Material Facilities," Rev. 1 (ML103360487)
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Rev. 2 (ML15176A258)
- NUREG-1140, "A Regulatory Analysis of Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees" (ML062020791 and/or ML101460227)

EVALUATION CRITERIA:

Upon the completion of this SG, the inspector should be able to:

- Discuss key elements of the basis for emergency planning.
- Discuss the general topics of the emergency planning requirements.
- Discuss the difference between the two emergency classification levels in terms of safety significance to the public.
- Discuss the key functions performed by members of the licensee's emergency response organization, including the personnel responsible for emergency classification during normal operations and back shifts.
- Discuss the notification process and timeliness for completing offsite notifications (federal, state, and local).
- Discuss response plans for restoring the facility to a safe status following an accident.

TASKS:

- Obtain a copy of NUREG-1520, Rev. 2 (ML15176A258) and review section 8.0.
- Obtain a copy of RG 3.67, Rev. 1 (ML103360487) and read it in its entirety.
- Obtain a copy of NUREG-1140 (ML062020791 and/or ML101460227) and read sections 1.0 and 2.0.
- Meet with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector to discuss any questions you may have as a result of these activities. Discuss the answers to the questions listed under the Evaluation Criteria section of this study guide with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector.

DOCUMENTATION: Fuel Facility Emergency Preparedness Inspector Proficiency Level
Qualification Signature Card, Item ISA-EP-2

(ISA-EP-3) Manual of Protective Action Guides and Protective
Actions for Nuclear Incidents

PURPOSE:

The purpose of this activity is to familiarize you with the guidance used by decision makers for **federal, state, and local agencies** regarding the appropriate protective action recommendations (PARs) in the event of a radiological emergency.

COMPETENCY AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 24 hours

REFERENCES:

- EPA 400-R-17-001, "PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents" https://www.epa.gov/sites/default/files/2017-01/documents/epa_pag_manual_final_revisions_01-11-2017_cover_disclaimer_8.pdf
- NRC Response Technical Manual (RTM) - NUREG/BR-0150, Volume 1, Revision 4 (RTM-96) (ML091980341)
- NUREG-1140, "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and other Radioactive Material Licensees" (ML062020791 and/or ML101460227)
- Defense Nuclear Facilities Safety Board letter regarding red oil dated November 13, 2003 <https://www.dnfsb.gov/documents/reports/technical-reports/control-red-oil-explosions-defense-nuclear-facilities>
- Memorandum dated March 10, 2003, "Regulatory Authority Over Chemical Hazards at Fuel Cycle Facilities" (ML030700317)
- SECY 02-0216, "Proposed Process for Providing Information on Significant Nuclear Materials Issues and Adverse Licensee Performance" (ML022410435)

EVALUATION CRITERIA:

Upon completion of this Study Guide, the inspector should be able to:

- Discuss protective action guides (PAGs) and the use of PAGs in planning for protective actions to safeguard the public and environment.
- Discuss the different phases of an accident.
- Discuss the PAGs for the early phase of an accident.
- Discuss the range of possible protective action recommendations (PARs).

- Discuss possible exceptions to implementing the protective actions.
- Discuss the PAGs for the late phase of an accident
- Discuss the various exposure pathways.
- Discuss fuel cycle events, offsite consequences, and the anticipated response by **federal, state, and local** authorities.
- Discuss the possible consequences of a uranium hexafluoride (UF₆) release and determine the need for protective actions.
- Describe the concern with the red oil phenomenon and how facilities protect against it.
- Describe your **r**egulatory **a**uthority **o**ver **c**hemical **h**azards **a**t **f**uel **c**ycle **f**acilities.
- **Discuss** Chemical Safety Training from the University of Illinois at Chicago on Hydrofluoric Acid. <https://drs.illinois.edu/Page/SafetyLibrary/HydrofluoricAcid>
- **Discuss** Honeywell Hydrofluoric Acid <https://www.drs.illinois.edu/site-documents/HFMedicalTreatmentGuide.pdf>
- Interim Guidance **Discuss** "Inspector Duties/Responsibilities During Terrorist-Based Threats/Attacks at Region II Reactor and Fuel Facilities".

TASKS:

- Obtain a copy of EPA 400-R-**17**-001 and read chapters 1 through 5. https://www.epa.gov/sites/default/files/2017-01/documents/epa_pag_manual_final_revisions_01-11-2017_cover_disclaimer_8.pdf
- Obtain a current copy of the NRC RTM-**96** and review table B-6, section E, and Methods E.1, E.2, E.3, and E.4.
- Review **S**ection 2.0 of NUREG-1140 (**ML062020791** and/or **ML101460227**).
- Obtain a copy of Defense Nuclear Facilities Safety Board letter regarding red oil dated November 13, 2003, and review the safety measure to prevent red oil. <https://www.dnfsb.gov/documents/reports/technical-reports/control-red-oil-explosions-defense-nuclear-facilities>
- Obtain a copy of references on hydrofluoric acid and describe the precautions necessary to prevent a chemical hazard.
- Review and describe the Interim Guidance on Inspector Duties/Responsibilities During Terrorist-Based Threats/Attacks at Region II Reactor and Fuel Facilities.
- Meet with your supervisor, the person designated as a resource, or a qualified **f**uel **f**acility **e**mergency **p**reparedness **i**nspector to discuss any questions you may have as a result of these activities. Discuss the answers to the questions listed under the

Evaluation Criteria section of this study guide with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector.

DOCUMENTATION: Fuel Facility Emergency Preparedness Inspector Proficiency Level
Qualification Signature Card, Item ISA-EP-3

Fuel Facility Emergency Preparedness Inspector
On-the-Job Training Activities

(OJT-EP-1) 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: INSPECTION
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

EVALUATION CRITERIA:

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

- Discuss how a designated licensee's Emergency Plan was organized and designed to satisfy emergency preparedness regulatory requirements and guidance.
- Discuss how this licensee's Emergency Plan commitments would be implemented and fulfilled through its use of EPIPs.
- Discuss how this licensee developed and maintains site-specific EALs consistent with regulatory requirements and applicable regulatory guidance.
- 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.
- Discuss how this licensee has established an ERO training program to meet regulatory requirements and to fulfill Emergency Plan commitments.

- Review and discuss a designated licensee's license application chapter(s) related to emergency preparedness program.

TASKS:

- Review copies of a licensee's Emergency Plan designated by your supervisor.
- Review copies of the same licensee's EIPs.
- Review the same licensee's technical bases document for its site specific EALs.
- 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.
- Review the same licensee's procedures for training its personnel on their assigned emergency response duties.
- Review a designated licensee's license application for statements on its emergency plan commitments, as applicable.

DOCUMENTATION: Fuel Facility Emergency Preparedness Inspector Proficiency Level
Qualification Signature Card, Item OJT-EP-1

(OJT-EP-2) 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 any site postulated emergency condition. Emergency Action Levels (EALs) provide entry criteria for classifying emergency conditions based on measurable and/or observable conditions. Standards for contents of Emergency Plans and EALs are found in NRC regulations and other guidance documents. In accordance with 10 CFR Parts 40.35(f), 70.32(i), licensees are allowed to make changes to their Emergency Plan and EALs without NRC prior approval if the changes do not decrease the effectiveness of the Plan. Upon completion of this on-the-job training (OJT), you will be able to determine whether licensee Emergency Plan changes are in accordance with the requirements in 10 CFR Parts 40 and 70.

COMPETENCY AREA: INSPECTION
REGULATORY FRAMEWORK
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 32 hours

REFERENCES:

- RG 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Material Facilities," Rev. 1 (ML103360487)
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Facility," () Rev. 2 (ML15176A258)
- 10 CFR Parts 40.31 and 70.22
- EPA 400-R-17-001, "PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents" https://www.epa.gov/sites/default/files/2017-01/documents/epa_pag_manual_final_revisions_01-11-2017_cover_disclaimer_8.pdf
- Site Integrated Safety Analysis or Safety Analysis Report
- Site Emergency Plan
- Regulatory Information Summary (RIS) 2005-02, "Clarifying the Process for Making Plan Changes", Rev. 1 (ML100340545)
- NUREG-1140, "A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees" (ML062020791 and/or ML101460227)
- Licensee procedures for evaluating and making changes to the Emergency Plan and emergency action levels and for evaluating a potential reduction in effectiveness of the Plan and implementing procedures.

EVALUATION CRITERIA:

Upon completion of the tasks in this OJT, you should be able to:

- Describe the NRC process for an in-depth review of Emergency Action Level and Emergency Plan changes that have been submitted to the NRC
- Describe what is meant by a “reduction in effectiveness” of the Emergency Plan, EALs, and/or Emergency Plan implementing procedures (EPIPs).
- Describe the regulatory requirements for licensees to make and implement changes to their Emergency Plan and/or EALs.
- Describe where to find the regulatory requirements for the contents of Emergency Plans and where to find regulatory guidance.
- Review a submitted Emergency Plan change and determine whether the change requires an in-depth review.
- Review a submitted Emergency Plan or EAL change to determine if the change results in a reduction in effectiveness of the Emergency Plan.

TASKS:

1. Review RIS 2005-02 (ML100340545) to identify the attributes used to determine if a change to an Emergency Plan or EAL constitutes a decrease in effectiveness.
2. Become familiar with the content of the following guidance documents for the development of PARs in the event of Emergency Plan changes involving PARs:
 - a. EPA 400-R-17-001, Chapters 1, 2, and 5
https://www.epa.gov/sites/production/files/2017-01/documents/epa_pag_manual_final_revisions_01-11-2017_cover_disclaimer_8.pdf
 - b. NUREG-1140 “A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees” (ML062020791 and/or ML101460227)
3. If available, obtain and review one NRC inspection report detailing the inspection of changes to a licensee’s EALs or Emergency Plan. Also, review the respective change(s) and independently assess whether the change(s) would constitute a reduction in effectiveness.
4. Meet with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector to discuss any questions that you may have as a result of these activities and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Fuel Facility Emergency Preparedness Inspector Proficiency Level Qualification Signature Card, Item OJT-EP-2

(OJT-EP-3) Emergency Drill/Exercise Evaluation

PURPOSE:

The conduct of any emergency drill or an emergency exercise (conducted biennially) allows the licensee to test and assess its emergency responders' performance and to identify and correct program and performance concerns. Fuel facilities are required to conduct emergency exercises biennially. The biennial exercise is a full-scale test of the entire onsite emergency response organization and the offsite support organizations are invited to participate. The performance of a full-scale exercise using scenarios that are not known by exercise participants provides the licensee with an opportunity to assess the performance of the emergency organization to identify and correct areas of deficiencies. Deficiencies may include personnel performance, equipment operability, and training. Upon completion of this on-the-job training (OJT), you should be able to evaluate the adequacy of a licensee's emergency response program and the effectiveness of the licensee to self-identify and resolve problems related to their emergency preparedness program.

COMPETENCY AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 80 hours

REFERENCES:

- RG 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Material Facilities," Rev. 1 (ML103360487)
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Facility," Rev. 2 (ML15176A258)
- 10 CFR Parts 40.31 and 70.22
- IP 88050, "Emergency Preparedness"
- Site Emergency Plan
- IP 88051, "Evaluation of Exercises and Drills"
- Office of Investigation and Enforcement, Information Notice No. 89-46, "Confidentiality of Exercise Scenarios" <https://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1989/in89046.html>
- NRC Letter (Edward McAlpine) to all Fuel Facilities dated November 20, 1996, "Submittal of Exercise Objectives and Scenario Details" (ML20134Q109)

EVALUATION CRITERIA:

Upon completion of the tasks in this OJT, you should be able to:

- Review at least two licensee's drill or exercise scenario submittal packages to determine if the scenario details would provide an adequate test of the Emergency Plan, Plan implementing procedures, and equipment.
- Discuss the time-line requirements for exercise scenario submittal packages and how submittals should be submitted to the NRC.
- Evaluate the performance of drill or exercise participants in areas such as: emergency classification, offsite notifications, protective action recommendations (PARs), command and control, press release, and other areas as appropriate (see IP 88051).
- Compare your independently identified performance concerns against the licensee's identified concerns to determine whether the licensee is critically assessing the response and self-identifying performance weaknesses and deficiencies, particularly with respect to the risk significant topics of emergency classification, declaration, notification, and PARs.
- Determine if the licensee's critique of exercise performance is effective in identifying exercise performance weaknesses and deficiencies, as well as concerns of lesser significance, for corrective action and prioritizing items for resolution.
- Compare the biennial exercise scenario's narrative summary and time-line to scenarios used previously by the licensee during quarterly drills, practice exercises, or the previous biennial exercise to determine if the scenario is unacceptably similar to previously used scenarios.
- 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.
- Determine if the licensee has demonstrated an adequate capability for providing reasonable assurance that 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:

- Review IP 88051, "Evaluation of Exercises and Drills," and IP 88050, "Emergency Preparedness," to identify the inspection attributes provided for drill/exercise performance evaluations. Discuss any questions with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector.
- Review licensee final exercise submittal package and become familiar with exercise objectives and the evaluation criteria for determining if objectives were met. Do this for two licensees, preferably two different types of fuel facilities (conversion, enrichment, fuel fabrication). Discuss any questions with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector.
- Review the regulatory requirements with regards to an exercise contained within 10 CFR Parts 40.31 and 70.22. Discuss any questions with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector.

- **Participate in at least two drill/exercises.** Coordinate with your supervisor or the lead inspector to identify which area(s) of the licensee's performance you may observe during the exercise based on the type of accident that is postulated. **At a minimum, observe the drill/exercise from at least three (3) vantage points (emergency operations center, incident command post, field team dispatch location such as fire/rescue squad, health physics personnel, environmental personnel, security personnel, etc.).** Refer to IP 88051.
- Based on the scenario details, become familiar with relevant portions of the licensee's Emergency Plan and Plan implementing procedures which provide requirements for classification, **declaration**, notification, and PARs to determine if the appropriate actions are taken.
- Review the exercise objectives and scenario details to determine if the postulated accident would provide an adequate test of the Plan. **Do this for two licensees, preferably two different types of fuel facilities (conversion, enrichment, fuel fabrication).** In the event you believe **the exercise objectives and/or scenario details are** inadequate, notify your supervisor, the lead inspector, and the licensee to discuss the appropriate actions associated with performing a remedial drill (refer to IP 88051). Identify opportunities for event recognition, **declaration**, classification, notification, and PAR development, and the licensee's criteria for determining performance success versus failure.
- In the event weaknesses or **deficiencies** were identified during the previous exercise, review the corrective actions taken by the licensee and identify performance areas for observation to determine the adequacy of the corrective actions in response to **any identified weaknesses or deficiencies.**
- During the exercise, do not interfere with the exercise players. Do not "prompt" exercise players or voice your opinions of players' performance during the exercise (see IP 88051). The NRC assessments and comments must be held confidential until after the licensee's critique presentation to the inspectors.
- Document examples (include the time) where licensee Controller or Evaluator observed prompting of exercise player(s) during the exercise. Refer to IP 88051.
- Obtain copies of any checklists and forms used by the emergency response organization during exercise performance with regards to event **classification, declaration**, notification, dose projection, PARs, and press releases.
- Obtain records of other observed areas in which you suspect corrective actions may be necessary. Identify if the weakness indicates a programmatic problem to the point that an emergency planning **requirement** was not met.
- Attend licensee evaluator meetings and critiques. Determine if the licensee's critique identified similar performance concerns as identified by the NRC. Pay particular attention to the characterization of response in areas such as event, **classification, declaration**, notification, PAR, corrective action failures, and other areas identified as needing improvements.

- Provide your observations and concerns to the lead inspector. Discuss your observations and provide a recommendation as to whether the licensee demonstrated the capability of providing reasonable assurance that adequate protective measures can be taken in the event of an emergency, or if a remedial exercise should be recommended to NRC management and the basis for the recommendation.
- Meet with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector to discuss any questions that you may have as a result of these activities and to demonstrate that you can meet the evaluation criteria for this OJT.

DOCUMENTATION: Fuel Facility Emergency Preparedness Inspector Proficiency Level
Qualification Signature Card, Item OJT-EP-3

(OJT-EP-4) Corrective Actions for Emergency Preparedness Weaknesses

PURPOSE:

Fuel facilities are required to identify and correct weaknesses and deficiencies discovered during events and through their emergency drill and exercise program. Upon completion of this OJT, you should be able to evaluate the overall ability of a licensee to self-identify and resolve problems related to their emergency preparedness program.

COMPETENCY AREA: INSPECTION
TECHNICAL AREA EXPERTISE

LEVEL OF EFFORT: 24 hours

REFERENCES:

- RG 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Material Facilities," Rev. 1 (ML103360487)"
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Facility," Rev. 2 (ML15176A258)"
- 10 CFR Parts 40.31 and 70.22
- Emergency Plan Quality Assurance Audit
- Site Emergency Plan
- IP 88050, "Emergency Preparedness"
- IP 88051, "Evaluation of Exercise and Drills"

EVALUATION CRITERIA:

Upon completion of the tasks in this OJT, you should be able to:

- Discuss emergency preparedness regulatory requirements for the identification and correction of deficiencies, weaknesses, and issues found during drill and event critiques.
- Provide examples where a licensee failed to properly capture an item in its corrective action system.
- Discuss method(s) for verifying the adequacy of corrective actions.
- Discuss with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector the overall effectiveness of a licensee's corrective actions as it relates to emergency preparedness following a review of

corrective action documentation, interviews, and/or performance observation during an event, emergency drill, or exercise.

TASKS:

1. Review the following documents for expectations associated with correcting weaknesses and deficiencies from emergency drills and exercises:
 - a. RG 3.67 Section 7.4
 - b. NUREG-1520 Section 8.4.3.1.13
 - c. 10 CFR 70.22 (i)(3)(xii)
 - d. 10 CFR 40.31 (j)(3)(xii)
2. As determined by your supervisor or the person designated as a resource, perform the following tasks under the guidance of a qualified fuel facility emergency preparedness inspector:
 - a. Review the licensee's corrective action program to determine if emergency preparedness issues are being tracked for resolution. Review if emergency preparedness issues are prioritized according to importance.
 - b. Obtain and review a copy of the exercise and/or drill critique items entered into the licensee's corrective action program since the previous inspection. Determine if the data indicates trends in areas such as event classification, notification, protective action recommendation(s), monitoring, and command and control. Discuss your conclusions with a qualified fuel facility emergency preparedness inspector.
 - c. If available review documentation associated with an activation of the emergency response organization in response to an actual emergency classification, Determine if documentation was adequate to support independent conclusion concerning the following:
 - i. Were the classification and offsite notifications performed correctly?
 - ii. Were there problems associated with Emergency Plan implementation during the event(s)?
3. Determine if negative performance or program issues were identified and captured in the corrective action program. Discuss your conclusions with a qualified Fuel Facility Emergency Preparedness Inspector.
 - a. Review the most recent independent audit and self-assessment required by the Emergency Plan/Emergency Preparedness Program. Verify that performance or program issues identified in the audit were captured in the corrective action program.
 - b. Request for review the final report or critique comments from an emergency drill or actual event for the period(s) in which the emergency response facility was activated since the last inspection. If reviewing a drill or exercise, review the following details:

- i. Drill scenario
 - ii. Participant and evaluator logs
 - iii. Offsite notification forms
 - iv. Dose projection worksheets
 - v. Environmental monitoring team sheets
 - vi. Significant event logs
 - vii. Post-drill critique notes and comment forms
4. Determine if all performance or program issues that were reviewed in the documentation were captured in the exercise report and the corrective action program. Discuss your conclusions with a qualified fuel facility emergency preparedness inspector, the person designated as a resource, or your supervisor.
 - a. During a site visit, select corrective actions associated with an emergency organization activation (drill or event) and obtain the detailed corrective action descriptions. As a guide for selection of corrective actions to review, consider items associated with emergency planning requirements (e.g., emergency classification, notification, protective action recommendations). Verify the actions taken were adequate.
 - b. If available for review, observe the adequacy of corrective actions during a performance activity such as a drill or exercise. As an alternative, depending on the issue, a walkthrough with response personnel may be used in place of a drill or exercise. Obtain the description of the corrective action and verify the completion of each corrective action through direct observation.
5. Meet with your supervisor, the person designated as a resource, or a qualified fuel facility emergency preparedness inspector to discuss any questions that you may have as a result of these activities and demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: Fuel Facility Emergency Preparedness Inspector Proficiency Level Qualification Signature Card, Item OJT-EP-4

Fuel Facility Emergency Preparedness Inspector Technical Proficiency Level
Signature Card and Certification

| | | |
|---|-----------------------------|-------------------------------------|
| Inspector Name: | Employee Initials / Date | Supervisor's Signature / Date |
| A. Training Courses | | |
| (F-206S) Fire Protection for Fuel Cycle Facilities | | |
| H-309) Health Physics in Radiation Emergencies | | |
| (H-107) Introduction to Emergency Preparedness Course | | |
| (H-203) Emergency Preparedness Technology | | |
| B. Individual Study Activities | | |
| (SG-EP-1) Code of Federal Regulations for Emergency Preparedness Inspectors | | |
| (SG-EP-2) Preparation and Evaluation of Radiological Emergency Plans | | |
| (SG-EP-3) Manual of Protection Action Guides and Protective Actions for Nuclear Incidents | | |
| C. On-the-Job Activities | | |
| (OJT-EP-1) Licensee Emergency Plan Documents | | |
| (OJT-EP-2) Emergency Action Level and Emergency Plan Changes | | |
| (OJT-EP-3) Emergency Drill/Exercise Evaluation | | |
| (OJT-EP-4) Corrective Actions for Emergency Preparedness Weaknesses | | |

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 card and certification must be accompanied by Form 1, Fuel Facility Emergency Preparedness Inspector Technical Proficiency Level Equivalency Justification, if applicable.

Form 1: Fuel Facility Emergency Preparedness Inspector Technical
Proficiency-Level Equivalency Justification

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|---|--|
| Inspector Name: | Identify equivalent training and experience for which the inspector is to be given credit. |
| A. Training Courses | |
| (F-206S) Fire Protection for Fuel Cycle Facilities | |
| (H-309) Health Physics in Radiation Emergencies | |
| (H-107) Introduction to Emergency Preparedness Course | |
| (H-203) Emergency Preparedness Technology | |
| B. Individual Study Activities | |
| (SG-EP-1) Code of Federal Regulations for Emergency Preparedness Inspectors | |
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| C. On-the-Job Activities | |
| (OJT-EP-1) Licensee Emergency Plan Documents | |
| (OJT-EP-2) Emergency Action Level and Emergency Plan Changes | |
| (OJT-EP-3) Emergency Drill/Exercise Evaluation | |
| (OJT-EP-4) Corrective Actions for Emergency Preparedness Weaknesses | |

Supervisor's Signature: _____ Date: _____

Attachment 1: Revision History for IMC 1247 Appendix C-3

| 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 Number (Pre-Decisional Non-Public Information) |
|----------------------------|---|---|--|---|
| N/A | 02/18/09 CN 09-006 | Researched commitments for 4 years and found none. New IMC to specify qualification requirements for NRC fuel facility operations, health physics, emergency preparedness, security, material control and accounting, and construction inspectors. | N/A | ML090400917 |
| N/A | ML13217A219 06/11/14 CN 14-012 | This document has been revised to update the refresher training requirements. Some of the training is no longer available. 16 hours of Refresher Technical Training seminar has been added as a Refresher training requirement. | None | ML14084A481 |
| | ML24082A162 07/24/24 CN 24-021 | Revised to update training courses, references, evaluation criteria, and tasks for many SGs and OJTs. Updated for current IMC formatting requirements. | None | N/A |