

NRC INSPECTION MANUAL

NMSS/DFM

INSPECTION MANUAL CHAPTER 1246, APPENDIX B3

TRAINING REQUIREMENTS AND QUALIFICATION JOURNAL FOR
INDEPENDENT SPENT FUEL STORAGE INSTALLATION INSPECTOR

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INTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) inspector qualification program requires completion of activities designed to develop or enhance skills relevant to performing the job of an inspector. Candidate inspectors should complete the qualification process and demonstrate the competencies of an independent spent fuel storage installation (ISFSI) inspector.

This ISFSI Qualification Journal of the Office of Nuclear Material Safety and Safeguards (NMSS), Division of Fuel Management (DFM), implements the NRC Inspection Manual Chapter (IMC) 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area," appendix B3, by establishing the minimum training requirements for a staff member qualifying as an ISFSI inspector. This qualification journal is managed by the Inspection and Oversight Branch (IOB) of the DFM within the NMSS.

A staff member completing this Qualification Journal should be able to understand the following:

1. The NRC organizational structure and regulatory objectives, as well as the basis for the authority of the agency
2. The technology and application of concepts in various technical areas related to the design, construction, and operation of an ISFSI to allow the NRC to carry out its overall responsibilities in the following way:
 - a. Understand science and engineering fundamentals related to basic ISFSI design and operations to protect the public health and safety and the environment.
 - b. Use technical knowledge of ISFSI design, construction, and operation to identify, address, and resolve regulatory issues.
3. The techniques and skills needed to collect, analyze, and integrate information using a safety focus to develop a supportable regulatory conclusion by doing the following:
 - a. Independently gather information through objective review, observation, and open communications.
 - b. Determine the acceptability of information by comparing to established regulatory criteria.
 - c. Respond to events or conditions involving a potential or actual adverse safety consequence.
 - d. Approach problems objectively, gather and integrate information, and develop a comprehensive understanding before reaching a conclusion.
 - e. Objectively analyze and integrate information using a safety focus to identify the appropriate regulatory conclusion and regulatory response.

The qualifying individual should also be able to develop personal and interpersonal skills necessary to carry out assigned regulatory activities, either individually or as part of a team. The required training should prepare the staff to clearly express ideas or thoughts, but also to carefully listen, speak, and write with an appropriate safety focus and context. The staff should be able to work collaboratively with others or independently during difficult or challenging situations in order to achieve a common goal, the safe operation of an ISFSI.

PROGRAM ORGANIZATION

The ISFSI Inspector Qualification Journal establishes the minimum training requirements consistent with IMC 1246. The Qualification Journal must provide traceable documentation to show that each ISFSI inspector has met minimum requirements. The employee's supervisor has the discretion to modify the requirements, as needed, based on the employee's previous experience, education, and course availability. The employee's supervisor may add, delete, or substitute with other material for training course(s) that will not be available during the qualification period. For exceptions to the ISFSI inspector qualification process (e.g., grandfathering and individuals qualified under other NRC offices/divisions), refer to section 8, "Exceptions," of IMC 1246 and Forms A-2 and B-2 of this appendix for equivalency justifications to each Training/ISA/OJT. In addition, the journal also contains forms that the candidate inspector will complete to document the justification for accepting equivalent training or experience as a means of meeting an inspector qualification requirement. The next section describes a streamlined process for the cross qualification of certain qualified inspectors under the Office of Nuclear Reactor Regulation (NRR).

The inspector qualification process is divided into two levels: (1) Basic Level and (2) Technical Proficiency Level. The Basic-Level activities are designed to help the candidate inspector develop awareness of the agency's and inspector's roles. Successfully completing the basic-level work will provide the candidate with a context for meaningful learning during onsite work and a foundation for in-depth learning at the Technical Proficiency Level. The Technical Proficiency activities are designed to develop the technical expertise through the review of ISFSI design, construction, and operational activities. These two levels of the ISFSI Inspector Qualification Journal consist of a series of independent study activities (ISAs) and on-the-job training (OJT) activities. Each ISA and OJT is used to document task completion, as indicated by the appropriate signature block(s).

With a Basic Inspector Certification, received by completing Part A of this qualification, the individual may be assigned to perform limited scope inspection activities under an appropriate degree of detailed supervision so that all recently acquired skill sets can be applied. The scope of the assigned inspection activities will be controlled by the individual's immediate supervisor. A Basic qualified individual can be asked to conduct inspection activities, but will not be expected to independently reach conclusions, describe official agency positions on evolving issues, or act as an official agency spokesperson. The emphasis in the inspector qualification program is to develop competencies so inspectors can evaluate information, analyze data, and apply NRC rules and regulations efficiently and effectively. Time may be charged to the licensee for work performed by the individual. In addition, for loading campaign inspections performed using IP 60855, the provision in IMC 1246 that states, "staff undergoing qualification may perform activities under the discretion of a qualified staff member in their specified area," means that the qualified staff member must be on-site during the inspection period to oversee inspectors that are not yet qualified under Part A of this journal or partial or full qualification of the cross-qualification process described below.

IMC 1245 APPENDICES C1, C2 OR C3 CROSS QUALIFICATION

Individuals qualified under IMC 1245 Appendix C1, "Reactor Operations Inspector Technical Proficiency Training and Qualification Journal," or IMC 1245 Appendix C2, "Reactor Engineering Inspector Technical Proficiency Training and Qualification Journal" or IMC 1245 Appendix C3 "Health Physics Inspector Technical Proficiency Training and Qualification Journal," may

become either a partial qualified or fully qualified inspector under IMC 1246, Appendix B3, "Training Requirements and Qualification Journal for Spent Fuel Storage and Transportation Inspector," by meeting the below training requirements in Table 1, "IMC 1245 Appendices C1, C2, or C3-Cross Qualification Requirements". The left column in Table 1 represents the minimum training requirements for IMC 1245 Appendices C1, C2, or C3 inspectors to become partially qualified under IMC 1246, Appendix B3 to conduct independent inspections under IP 60855, "Operation of an ISFSI." The right column represents the additional training requirements for IMC 1245 Appendices C1, C2, or C3 inspectors to become fully qualified under IMC 1246 Appendix B3 to independently conduct all ISFSI inspection procedures. IMC 1245 Appendices C1, C2, or C3 inspectors are considered to have equivalent training for all items not listed in the table below. Full or partial qualification should also be indicated in the signature block as directed for Forms B-1 and B-2 (if necessary) for completion of qualification activities.

Table 1: IMC 1245 Appendices C1, C2, or C3 Cross Qualification Requirements

1246 Appendix B3 Basic-Level and Technical Proficiency Level Qualification	
Partial Qualification	Full Qualification
Part A-1 Individual Study Activities	
(ISA-17) Overview of 10 CFR Part 71 and 72	
Technical Proficiency Level Training Courses	
Crane Technology (SF-182)	
	Introductory Health Physics (H-117S) or Fundamental Health Physics (H-122S/122L)*
	Concrete Technology and/or Codes Course (E-117)
Welding Technology and/or Codes Course	
NDE Technology and/or Codes Course (E-306)	
Independent Spent Fuel Storage Installations Self-Study Course (F-220S)	
Part B-1 Individual Study Activities	
(ISA-Technical-1) ISFSI Inspection Procedures	
	(ISA-Technical-4) ISFSI Licensing
(ISA-Technical-5) ISFSI Control of Heavy Loads	
(ISA-Technical-6) ISFSI Canister Processing	
	(ISA-Technical-7) ISFSI Pad Construction and Design
(ISA-Technical-8) Radiation Protection	
(ISA-Technical-9) ISFSI Canister Sealing	
(ISA-Technical-10) ISFSI Fuel Selection	
(ISA-Technical -11) 10 CFR 72.48**	(ISA-Technical-11) 10 CFR 72.48
Part B-2 On-the-Job Training Activities	
	(OJT-1) ISFSI Pad Inspection Accompaniment
	(OJT-2) ISFSI Preoperational Testing Accompaniment
	(OJT-3) ISFSI 72.212 Review Accompaniment
(OJT-4) ISFSI Operational Accompaniment	

* Not required for IMC 1245 C3 qualified inspectors.

** Not required for IMC 1245 C1 or C2 qualified inspectors

As with all qualifications, regional management can formally determine and document if equivalencies or waivers are appropriate for the given individual by following guidance in IMC 1246, however, modules found in Training Course F-220S, "ISFSI Inspector Training," by themselves are not equivalent to completing the individual study activities listed in table 1.

DISCUSSION

This DFM Qualification Journal contains a qualification summary sheet and signature cards. The supervisor should discuss the scope of this regional ISFSI Inspector Qualification Journal and expected knowledge level, as described later in this journal, with the inspector in training before the candidate starts the qualification process. Usually, the candidate's immediate supervisor signs the material completed during the qualification process. The candidate's supervisor may also delegate this responsibility to a qualified inspector as needed. The inspector in training is expected to complete all ISAs and OJTs. At the supervisor's discretion, requirements may be deleted or added, depending on the candidate inspector's previous experience, and shall be documented in the form found in Forms A-2 and B-2 to this Qualification Journal.

The inspector in training is expected to use the current version or revision of each document cited in this Qualification Journal. Most of the documentation is readily available on either the (1) NRC's internal Web site, (2) NRC's Agencywide Documents Access and Management System (ADAMS), or (3) regional library.

Some of the required formal training courses may not be immediately available. The supervisor may substitute an alternative course, or substitute another method to meet the requirement, or delete the requirement altogether. Any such change should be documented in this Qualification Journal and justified in the form found in Forms A-2 and B-2 to this Qualification Journal.

The time necessary to complete this DFM Qualification Journal will vary, depending on the candidate's previous experience and education, but management expects completion within 24 months. However, the availability of required training courses and the candidate inspector's assigned workload may also prolong the time period, which should be approved by the candidate's immediate supervisor.

QUALIFICATION BOARD CERTIFICATION

IMC 1246 provides guidance for Board members to use in conducting the oral qualification. Additional guidance provided below explains how to document possible Board outcomes.

Upon approval from the Division Director, the oral board may be waived based on previous qualification.

Board Recommendations

The Board will document the results of its assessment, in writing, to the Division Director, each time a Board examines an individual, as follows:

- a. If the Board's assessment is favorable, the recommendation will be to grant Full Qualification. Any areas where additional review is required (lookup items) must be completed by the individual and verified by an assigned member of the Board before the Board forwards its decision to the Division Director.
- b. If the Board has identified areas of weakness requiring formal remediation, the Board will identify the areas for improvement in writing and recommend that the individual appear before a Board for reexamination when the remediation activities are complete. The Board and the individual's supervisor will agree on a schedule for reexamination.
- c. If the Board has identified performance deficiencies that could not be (in the Board's opinion), or cannot likely be, successfully addressed with a thorough remediation effort, the Board will document the full scope of the deficiencies and recommend that the individual not be remediated or reexamined.
- d. A copy of each Qualification Board's results, identifying any weaknesses and deficiencies, will be placed in the individual's personnel file. The individual will receive a copy of the Board's findings and recommendation.

Reexamination Board: A Reexamination Board must include at least one individual from the original Board. The Board questioning during reexamination will focus on the areas of identified weakness.

Board Documentation: The Board's decisions are forwarded to the Division Director for information. The form on the following page shall be used to document the Board's decision.

RESULT OF QUALIFICATION BOARD
FOR INSPECTOR

Date of Oral Board: _____

Successful or Unsuccessful (circle outcome) Completion of Oral Board:

_____ Chairperson	_____ Date
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_____ Member	_____ Date
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_____ Member	_____ Date
-----------------	---------------

Qualification Completion Certification Memo Issued:

_____ Supervisor	_____ Date
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Qualification Completion Certificate Issued/Ordered:

_____ Supervisor	_____ Date
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Part A: Basic-Level Training and Qualification Journal

PART I. BASIC-LEVEL TRAINING AND INDIVIDUAL STUDY ACTIVITIES

Basic-Level Training Courses

The following courses can be taken in any order. Technical-Proficiency Level training may be started at this level, provided that the training does not require the successful completion of the Basic-Level as a prerequisite.

Note: Before signing up for any training course, you should verify that you have met the prerequisites.

- Site Access Training Self-Study Course (Web-based, course H-100S in the Talent Management System (TMS))
- The NRC: An Agency Overview (Web-based course in TMS)
- G-105, Conducting Reactor Inspections (instructor-led, course in TMS)
- Gathering Information for Inspectors Through Interviews (instructor-led, course in TMS)
- Effective Communications for NRC Inspectors (instructor-led, course in TMS)
- Media Training Workshop (instructor-led, course in TMS)
- Industrial Safety/OSHA – *Course Title Subject to Change*
- G-205, Root Cause/Incident Investigation Workshop (instructor-led, course in TMS)

Basic-Level Individual Study Activities

The individual study activities (ISAs) are designed to direct and focus your efforts as you begin reviewing documents that will be important to the performance of your job. Each study activity begins with a purpose statement explaining why the activity is important and how it relates to the job of an inspector. The level of effort has been noted so that you have an idea of how much effort should be expended in completing the activity. (The amount of time is an estimate.) The evaluation criteria are listed up front to allow you to review them first and better understand the expectations when you are completing the activity. The evaluation criteria should help you to focus on the relevant information. The tasks outline the process to successfully understand the information required to complete the ISA.

The following general guidance applies as you complete the various study activities:

Complete the first two ISAs first. Becoming familiar with the agency and the overall role of an inspector is important for successfully completing the remaining activities. You should also become familiar with the content of the remaining activities, which will allow you to complete the activities as opportunities arise.

Your immediate supervisor or a qualified inspector, as designated by your immediate supervisor, will act as a resource to assist you in completing each activity and signing off the

qualification journal requirements as you complete the material. You should discuss the material in the ISA with your immediate supervisor or designated resource.

You are responsible for keeping track of the tasks you have completed. Be sure to complete all the tasks in each activity before meeting with your supervisor or designee for evaluation.

(ISA-1) History and Organization of the U.S. Nuclear Regulatory Commission

PURPOSE:

The purpose of this activity is to familiarize you with the regulatory history of the commercial nuclear industry and the evolution of the regulatory framework under which the staff of today's U.S. Nuclear Regulatory Commission (NRC) functions. During this activity, you will review the organization of the agency and its staff and the relationships between the major offices.

COMPETENCY AREA: REGULATORY FRAMEWORK

LEVEL OF EFFORT: 8 hours

REFERENCES:

- Title 10 of the Code of Federal Regulations (10 CFR)
- NUREG-1350, "Information Digest," (NUREGS are in the Document Collections section of the NRC Library on the public Web page, select the latest edition)
- NUREG/BR-0175, "A Short History of Nuclear Regulations," Revision 2, October 2010
- NRC External Webpage: About NRC (<https://www.nrc.gov/about-nrc.html>)
- Talent Management System (TMS) Course: "The NRC: An Agency Overview"

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate an understanding of the agency's regulatory history and development of the commercial applications of nuclear energy by successfully doing the following:

- Discuss the purpose of the Atomic Energy Act of 1954, as amended.
- Discuss the major regulatory impacts of the Energy Reorganization Act of 1974, as amended.
- Outline the major offices (and regions) and briefly describe the functioning of the Commission, the Office of the Inspector General, Office of the Secretary, the Atomic Safety and Licensing Board, the Advisory Committee on Reactor Safeguards, and Commission staff and program offices, including the Chief Financial Officer and Executive Director for Operations.
- Describe the Regions' and offices' organization, as well as key management positions.
- Discuss the relationship between the NRC and the U.S. Department of Energy (DOE).
- Describe the organization and the function and types of issues that each branch deals within the Division of Fuel Management (DFM).

TASKS:

- Obtain paper or electronic copies of the above-listed reference material for personal use and future reference. Some documents may be available through the regional public affairs office. You can find electronic copies of documents on the NRC external Web site in the Electronic Reading Room.
- Review the reference material to gain an understanding of the items discussed in the evaluation criteria.
- Review and discuss the evaluation criteria with your supervisor or designee.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-1.

(ISA-2) Inspector Objectivity, Protocol, and Professional Conduct

PURPOSE:

The purpose of this activity is to acquaint you with the NRC's expectations of inspector conduct and protocol. Professionalism is essential to the agency's ability to fulfill its goals of protecting public health and safety. Inspector conduct is a vital component of the NRC's credibility as an effective regulator. As a qualified inspector, you will often be representing the agency in interactions with licensee management and workers, local officials, media, and the public. This ISA will help you to understand NRC procedures, policies, and expectations related to inspector conduct. This activity will also help you to develop the professional conduct that you will need to be an effective NRC inspector.

COMPETENCY AREA: INSPECTION
 SELF-MANAGEMENT

LEVEL OF EFFORT: 8 hours

REFERENCES:

- NRC Inspection Manual Chapter (IMC) 0102, "Oversight and Objectivity of Inspectors and Examiners at Reactor Facilities"
- TMS Training: Ethics Training for New NRC Employees
- Management Directive (MD) 7.5, "Ethics Counseling and Training"
- IMC 1201, "Conduct of Employees"
- IMC 2515 section 12.06, "Witnessing Unsafe Situations"
- MD 8.17 "Licensee Complaints Against NRC Employees"
- The Ethics page of OGC's Internal Website (<https://intranet.nrc.gov/ogc/nrc-ethics>)
- Regional or office guidance related to inspector/employee conduct

EVALUATION CRITERIA:

Upon completion of the tasks in this activity, you will be asked to demonstrate your understanding of proper NRC inspector conduct during inspections at nuclear facilities by successfully addressing the following:

1. What is expected of NRC employees regarding:
 - a. Alcohol and illegal drugs?
 - b. Official business and personal relationships?
 - c. Business partnerships with licensees?
 - d. Work habits and professional demeanor?

2. Describe the restrictions regarding the following specific employee activities that could result in a loss of impartiality (or the perception thereof):
 - a. Accepting transportation from a licensee
 - b. Attending social functions essentially limited to licensee and contractor attendance
 - c. Coffee clubs, cafeterias, credit unions
 - d. Property and neighborhood relationships
 - e. Community activities
 - f. Employment of spouse and children
3. Explain the Office of Government Ethics (<https://www.oge.gov>) standards of ethical conduct for the following areas as applicable to NRC inspectors:
 - a. Gifts from outside sources
 - b. Gifts between employees
 - c. Conflicting financial interests
 - d. Impartiality in performing official duties
 - e. Seeking other employment
 - f. Misuse of power
 - g. Outside activities
4. What actions are NRC personnel expected to perform when they identify unsafe work practices or violations that could lead to an unsafe situation?
5. What are some of the techniques used by NRC managers to verify the performance and objectivity of individual inspectors and team leaders during onsite activities at reactor facilities? Your answer should include discussion of the specific areas that NRC management should focus on in assessing inspectors.
6. What are the expectations of inspector conduct in a reactor control room during normal, transient, and emergency conditions?
7. What are NRC employees supposed to do if they receive an allegation of improper action by an NRC staff member or contractor involved in inspection or other oversight activities?

TASKS:

- Complete the ethics training. To access the training, go to TMS and search Ethics. Select Ethics Training for New NRC Employees. Be sure to print the completion record at the end of the course. You must present evidence to your supervisor of the completion of this training course.
- Locate and review the material specifically listed in the reference section of this activity. Although the agency has a code for employee/inspector conduct, not all regions or offices have specific guidance in this area. You should closely review the guidance applicable to your position.
- Meet with the regional or office counsel or other designated ethics expert and discuss applications of ethics to your role as an NRC employee and any questions you may have as a result of this activity. You should demonstrate understanding of the guidance by

explaining the answers to the first three questions listed in the evaluation criteria section of this activity.

- Discuss the items listed under the evaluation criteria section of this study activity with your immediate supervisor or designee.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-2.

(ISA-3) Fitness-for-Duty Rule

PURPOSE:

The purpose of this activity is to provide you with an understanding of the fitness-for-duty (FFD) rule. Nuclear power plants and certain other NRC licensees are required to have FFD programs, which include drug and alcohol testing procedures and other measures to ensure that the licensee staff is capable of operating the facilities safely.

Note: Research and test reactors are not subject to 10 CFR Part 26, "Fitness for Duty Programs," but according to 10 CFR 55.53(j), each licensed operator is required to meet FFD performance standards, and according to 10 CFR 55.53(k), each licensed operator "...shall participate in any drug and alcohol testing program that may be established for that non-power facility."

COMPETENCY AREA: INSPECTION
 SELF-MANAGEMENT

LEVEL OF EFFORT: 3 hours

REFERENCES:

- Enforcement Manual, Part II, section 2.4, "Enforcement Actions Involving Fitness-For-Duty (FFD)"
- 10 CFR Part 26, "Fitness for Duty Programs"
- SECY 00-0022, "Rulemaking Plan, "Decrease in the Scope of Random Fitness-for-Duty Testing Requirements for Nuclear Power Reactor Licensees," for Amendments to 10 CFR Part 26"
- NUREG-1912, "Summary and Analysis of Public Comments Received on Proposed Revisions to 10 CFR Part 26 – Fitness for Duty Programs" section 4.2, "Performance Objectives" and section 4.4.3, "Procedures"

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the NRC's FFD rule by successfully addressing the following:

- State the purpose of the NRC's FFD rule and which licensees are required to meet this rule.
- Explain why the FFD rule (10 CFR Part 26) is not considered an "unwarranted" invasion of privacy and how licensees implement the requirements.
- Discuss the enforcement policy related to violations of the FFD rule as shown in the enforcement manual.
- Answer the following questions related to FFD. To whom does the FFD rule apply? Can a licensee deny access to an NRC inspector whom it suspects has been drinking? If not,

what can the licensee do? What are the reporting requirements associated with FFD violations committed by licensed operators, supervisory personnel, and maintenance technicians?

TASKS:

- On the NRC's external Web site, use the search function to find information on FFD. Explore all aspects of the FFD rule and drug testing program guidance.
- Open 10 CFR Part 26 and read the table of contents. Understand the Purpose, Scope, and FFD Program applicability.
- Be familiar with the purpose and scope of the references listed in this section.
- Have a discussion with a Security Inspector about the FFD Rule.
- Meet with your immediate supervisor, or the person designated to be the new employee resource for this activity, to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-3.

(ISA-4) Allegations

PURPOSE:

The purpose of this activity is to familiarize the candidate with the procedures, guidance, and activities applicable to handling the receipt, processing, review, and closure of allegations. This study activity will help you to effectively interact with individuals bringing concerns to the NRC and to appropriately respond to those concerns.

COMPETENCY AREA: INSPECTION SELF-MANAGEMENT COMMUNICATION

LEVEL OF EFFORT: 20 hours

REFERENCES:

- MD 8.8, "Management of Allegations"
- Allegation Manual (<https://intranet.nrc.gov/oe/allegation-manual>)
- NRC Form 613, "Program Identity Protection Policy" available in the Forms Library at: <https://usnrc.sharepoint.com/teams/NRC-Forms-Library/SitePages/Home.aspx>
10 CFR 50.5, 10 CFR 72.12, "Deliberate Misconduct"
- 10 CFR 50.7, "Employee Protection"
- 10 CFR 50.9, 10 CFR 72.11, "Completeness and Accuracy of Information"
- Regional or office guidance on allegations
- NUREG/BR-0240, "Reporting Safety Concerns to the NRC"
- Office of Enforcement Web page
- TMS Training: "Allegations Process" and "Allegations Intake and Routing"

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to show your understanding of the NRC's allegation process by successfully addressing the following:

- State the criteria used to evaluate a statement to determine if the information in the statement is a potential allegation.
- State the information that is required to be obtained during the receipt of a potential allegation.
- State the role of the Office Allegation Coordinator (OAC).
- State the purpose of, and the steps taken to prepare, an Allegation Review Board (ARB) briefing sheet.

- State the information that should be provided to an ARB as well as who is required to be on the ARB.
- Describe the allegation evaluation methods that may be directed by the ARB and discuss what information is needed to close the allegation for each approach. State the purpose of, and the information needed to prepare allegation closure documentation.

Explain what an Ad-Hoc/Emergency ARB is and when it is used.

TASKS:

1. Review the applicable regulations and guidance listed in the reference section including Exhibit 1 of the Allegation Manual.
2. Complete the two TMS training modules listed in the Resources section of this ISA. Individuals who are assigned to a Regional office may also have to take focused allegation training that was developed based, in part, upon lessons learned. If you are assigned to a Regional office consult your supervisor for details regarding the need to complete such training.
3. Review the applicable regional or office guidance for allegations.
4. Review two closed allegation case files (if possible, one should include an inspection effort):
 - a. Identify how incoming correspondence or information was determined to meet the definition of an allegation and how specific concerns were identified.
 - b. Review the associated ARB briefing sheets, particularly the determination of safety significance and the proposed action plan.
 - c. Review the associated allegation closeout memorandum or closeout letter to understand the rationale and basis for an allegation closeout.
5. Obtain the inspection results and/or licensee review information for a concern that has been referred. Discuss the precautions and limitations associated with referrals with your supervisor or the OAC.
6. Coordinate a meeting with the OAC to discuss the allegation process and the OAC's role in the process.
7. Discuss with your immediate supervisor or OAC the options available to the NRC to follow up an allegation and the circumstances when each option is appropriate.
8. Attend two ARB meetings.
9. Work with your immediate supervisor or OAC:
 - a. Simulate receiving an allegation and complete the required documentation to present the concern at an ARB meeting. Include a discussion of safety significance and regulatory requirements and issues.

- b. Discuss with your supervisor or OAC a proposed plan to resolve the simulated allegation.
 - c. Obtain the inspection and/or investigation results; compare the results to the original concerns. Discuss with your immediate supervisor or the OAC how the inspection results addressed the concerns. Discuss whether the allegation concerns were substantiated and how you would respond to the allegor.
10. Meet with your immediate supervisor or the OAC to discuss any questions that you may have as a result of this activity and to demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-4.

(ISA-5) NRC's Response to an Incident at a Nuclear Facility

PURPOSE:

The purpose of this activity is to acquaint you with the actions taken by the NRC in response to an emergency that may occur at a nuclear facility. Incident Response (IR) is vital to the agency, fulfilling one of its primary mandates of protecting the health and safety of the public. As a fully qualified inspector, you will be trained to perform specific IR activities. This ISA will help you to understand how the NRC meets its mandate and will begin to build the knowledge that you will need later to successfully meet IR responsibilities.

COMPETENCY AREA: INCIDENT RESPONSE

LEVEL OF EFFORT: 12 hours

REFERENCES:

- NRC internal Web page (Program Office>Nuclear Security and Incident Response (NSIR))
- MD 8.2, "NRC Incident Response Program"
- Regional policy guide for emergency response
- Incident Response Manual Chapter 200, "Incident Response Plan"
- Inspection Procedure (IP) 71153 Attachment 2, "Limiting NRC Impact During Events"
- TMS Training: General Response Training (Web-based)
- TMS Training: ICS 100 Introduction to the Incident Command System (Web Based)
- TMS Training: IS-700 An Introduction to the National Incident Management System (Web Based)

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the role of the agency and your region or office in protecting public health and safety when responding to emergency situations at a nuclear facility by successfully addressing the following:

1. Identify the types of emergency classifications and give examples of when the different classifications would be declared.
2. Describe the differences in capabilities and functions between the NRC Incident Response Program when it is activated and when it is not. Describe the process by which the NRC activates the response program.
3. Discuss the capabilities (e.g., communications, information technology) provided in the Headquarters, regional, and onsite and offsite emergency response facilities.

4. Identify the responsibilities of the following during an activation of the NRC's IR Program:
 - a. Response Director
 - b. Senior Agency Representative to the Licensee/Unified Coordination Group
 - c. Public Information Team
 - d. Liaison Team
 - e. Operations Section Chief
 - f. Reactor Safety Group
 - g. Protective Measures Group
 - h. Security Group
 - i. Planning Section
 - j. Logistics Section
 - k. Headquarters Operations Officers
5. If you are on site when an emergency is declared, explain the difference in your actions if the resident inspectors are on site or if they are not on site. Describe the protocol for limiting unnecessary impact on licensee activities during an event.
6. Describe the roles of the state and licensee emergency response facilities, such as the Technical Support Center (TSC), Alternate TSC, Operations Support Center, Emergency Operations Facility, Joint Information Center, and State Emergency Operations Center. Describe the role of the Main Control Room during emergencies.

TASKS:

- Review your region or office's policy guidance on incident response.
- Review the NRC Incident Response Plan (IRMC 200) in order to address the evaluation criteria.
- Complete the TMS Courses listed within the Reference Section.
- Inspectors should meet the incident response coordinator, tour the incident response center, and if possible, observe the NRC's response during a drill or event.
- Meet with your supervisor or the person designated to be your resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-5.

(ISA-6) Enforcement Program

PURPOSE:

The purpose of this activity is to provide an overview of the NRC enforcement program. This ISA will assist you in learning and understanding the following: (1) the purpose of the enforcement program, (2) the sanctions used in the enforcement program, and (3) the methods used in assessing and dispositioning violations. It will also provide you with an understanding of the information and guidance resources available concerning the enforcement program.

COMPETENCY AREAS: REGULATORY FRAMEWORK ENFORCEMENT

LEVEL OF EFFORT: 17 hours

REFERENCES:

- Enforcement-related information found on the Enforcement Webpage of the NRC public Web site, including the enforcement program overview and the enforcement process diagram (<https://www.nrc.gov/about-nrc/regulatory/enforcement.html>)
- The Enforcement Policy
- The Enforcement Manual
- “Writing Violations” course in TMS
- Regional policy guide for enforcement

EVALUATION CRITERIA:

Upon completion of the tasks in this activity, you should show your understanding of the agency’s enforcement program by successfully completing the following:

- State the purpose of the NRC enforcement policy.
- Identify the burden of proof standard that the NRC uses in enforcement proceedings.
- Identify the primary sanctions that the NRC uses in the enforcement program.
- State the four issues that the NRC considers in assessing the significance of a violation.
- Describe the two types of significance categorization outcomes.
- Define “minor violation” and state the policy on documenting and correcting these violations.
- Define “non-cited violation.”
- Define “escalated enforcement action.”

- Understand how to use the enforcement process diagram to disposition violations.
- Describe predecisional enforcement conferences and regulatory conferences and explain why, when, and with whom these are conducted.
- Discuss the purpose of civil penalties, when the NRC considers issuing them, and how the NRC determines the amount of penalties.
- Recognize the purpose of the different types of Orders and when these are used.
- Be able to explain the enforcement process from the moment an apparent violation is identified up until the violation is dispositioned.

TASKS:

- Locate the Enforcement Web page on the NRC public Web site. (Hint: Look under “About Us, How We Regulate.”)
- Read the enforcement program overview included on the Enforcement Web page of the NRC external Web site.
- Read the enforcement process diagram on the Enforcement Web page of the NRC external Web site.
- Locate the enforcement manual on the Enforcement Web page of the NRC external Web site (look under “Enforcement Guidance”) and review the table of contents and appendices.
- Read the memorandum from the Director, Office of Enforcement, titled “Dispositioning of Enforcement Issues in a Risk-Informed Framework,” dated December 5, 2000 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML003777558).
- Locate the most recent escalated enforcement action for a power reactor on the Enforcement Web page of the NRC external Web site and review the transmittal letter and the attached notice of violation.
- Review your region or office’s guidance on implementing the enforcement policy.
- Go to TMS and complete the course on “Writing Violations.” Follow the guidance in the course to draft violations for the three sets of facts presented in the course.
- Meet with the enforcement specialist in your region or office to review the draft violations you developed as part of the “Writing Violations” course and discuss the current enforcement guidance.
- Meet with your immediate supervisor or the designated person and discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor’s or designee’s signature in the line item for Basic-Level Certification Signature Card Item ISA-6.

(ISA-7) Office of Investigations

PURPOSE:

The purpose of this activity is to familiarize you with the role of the Office of Investigations (OI). A qualified inspector may be assigned to work with OI by providing technical support. This ISA will help you to understand the role of OI, how it functions, and your responsibilities during an investigation.

COMPETENCY AREA: INSPECTION
REGULATORY FRAMEWORK

LEVEL OF EFFORT: 4 hours

REFERENCES:

- MD 9.8, "Organization and Functions, Office of Investigations"
- OI Web page on the NRC external Web site
(<https://www.nrc.gov/about-nrc/organization/oifuncdesc.html>)
- NRC OI on internal NRC Web site

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the purpose and function of OI by successfully addressing the following:

- State the function of OI.
- Describe the organizational structure of OI.
- Describe the staff's role in assisting OI, and why it is important to not discuss the facts/issues of the case to individuals that do not have "a need to know."
- Describe the authorities of an OI investigator.

TASKS:

- Review MD 9.8.
- Review the OI Web page and associated organizational charts.
- Meet with an experienced OI criminal investigator and discuss two materials/reactor cases investigated by OI, one substantiated and one not substantiated.
- Meet with your immediate supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-7.

(ISA-8) Understanding How the Commission Operates

PURPOSE:

The NRC Commissioners establish the approach that the NRC staff will use to address a particular need of agency importance. Examples include the Commission policy statement regarding NRC staff use of probabilistic risk analysis in the decision-making process and resident inspector staffing requirements at power reactor facilities. Commission decisions can have a significant impact on the conduct of inspection activities, and inspectors should be familiar with the direction-setting and policymaking activities of the Commission.

COMPETENCY AREA: REGULATORY FRAMEWORK

LEVEL OF EFFORT: 4 hours

REFERENCES:

- NRC external Web site

EVALUATION CRITERIA:

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

- Locate Commission-related documents on the NRC external agency Web sites.
- Discuss how the Commission uses staff requirements memoranda to direct the staff.

TASKS:

- Read about the Commission's direction-setting and policymaking activities under "Direction-Setting and Policy Making Decisions."
- Read about the different kinds of decision documents issued by the Commission.
- Meet with your immediate supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-8.

(ISA-9) Organization and Content of the NRC Inspection Manual

PURPOSE:

The purpose of this activity is to introduce you to the content and organization of the NRC Inspection Manual and how it relates to inspection programs, particularly the Independent Spent Fuel Storage Installation (ISFSI) Inspection Program. As an inspector, you will be following an inspection program that is defined by a chapter of the manual and implemented by its associated IPs. This study activity will help you to identify and locate IPs that are used in the operating inspection program and to recognize the limitations associated with applying the guidance in the procedures. This activity will also introduce you to manual chapters establishing policy that will govern some of your actions in implementing the inspection program.

COMPETENCY AREAS: REGULATORY FRAMEWORK INSPECTION

LEVEL OF EFFORT: 4 hours

REFERENCES:

- NRC internal home page (Program Office—NMSS)
- IMC 0040, "Preparation, Revision, Issuance, and Ongoing Oversight of NRC Inspection Manual Documents"

EVALUATION CRITERIA:

After completing this activity, you will demonstrate your understanding of the content and organization of the NRC Inspection Manual, as well as the limitations associated with applying the guidance in the manual, by successfully doing the following:

1. Identify the major parts of the NRC Inspection Manual.
2. State the purpose of each of the following types of documents located in the NRC Inspection Manual:
 - a. Inspection Manual Chapters (IMCs)
 - b. Inspection Procedures (IPs)
 - c. Temporary Instructions (TIs)
 - d. Change Notices (CNs)
3. Describe the numbering/identification process used for the items in Criterion 2 above.
4. Demonstrate the ability to locate copies of inspection documents contained in the NRC Inspection Manual on the NRC Web site.

TASKS:

1. Read in detail the section of IMC 0040 titled "Responsibilities and Authorities" and become familiar with the remainder of the document. Become familiar with the table of contents for the "NRC Inspection Manual," noticing the following:

- a. The date of issuance and latest change notice entered in the table of contents.
 - b. The titles associated with CFR Part numbers.
 - c. The number associated with each document.
 - d. The issue date and change notice number associated with each document.
2. Locate the section of the NRC Inspection Manual titled "Technical Guidance."
3. Meet with your immediate supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-9

(ISA-10) Federal, Tribal, and State Government Relations

PURPOSE:

Throughout an inspector's career, there may be several instances where interaction with a Tribal Nation may occur. In addition, while conducting inspection activities, inspectors may identify important issues that could adversely affect health and safety but are not under the direct regulatory authority of the NRC. Examples include industrial safety items, such as loose asbestos insulation, and other issues, such as radioactive waste shipping trailer concerns. To ensure that these items are addressed by the proper regulatory authority, the NRC has established agreements, called memoranda of understanding (MOU), with other Federal and State agencies which outline how these issues should be addressed.

This activity will introduce you to the NRC's liaison role and major interagency agreements that the NRC has entered into.

COMPETENCY AREA: REGULATORY FRAMEWORK

LEVEL OF EFFORT: 6 hours

REFERENCES:

- IMC 1007, "Interfacing Activities between Regional Offices of NRC and OSHA"
- "U.S. DOT/NRC Memorandum of Understanding," dated July 2, 1979 (*Federal Register* Notice 44 FR 38690))
- Federal Emergency Management Agency (FEMA) and NRC MOU (ML051680117)
- Additional Federal or State Agencies/NRC MOUs.
- Tribal Policy Statement
- MD 5.2, "Cooperation with States at Commercial Nuclear Power Plants and Other Nuclear Production or Utilization Facilities," Appendix A
- TMS Training: Cultural Sensitivity Training: Engaging Native Americans in the NRC's Mission
- Regional, division, or office guidance (if applicable)

EVALUATION CRITERIA:

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

- Be able to discuss the NRC's commitment to communicate with Tribal Nations and how it relates to an inspector.
- Be familiar with the appropriate protocol and how to display cultural sensitivity when interacting with Native American tribes.

- Be familiar with active MOUs used to coordinate between the NRC and other Federal or State agencies.
- Explain, in general terms, how the NRC coordinates with State and other Federal agencies on matters that are not under the regulatory authority of the NRC.
- Explain the actions required when an NRC inspector identifies an occupational health and safety issue at a facility. Be able to state where the guidance for these actions is provided.
- Explain how other Federal, Tribal, and State Governments may identify issues of concern to the NRC.
- Explain how an inspector interacts with State and Federal Agencies, and Tribal Governmental Representatives who request to observe an NRC inspection.
- Identify the regional or office point of contact for coordinating NRC activities with Tribal Governments as well as State and Federal agencies.

TASKS:

- Identify where the current NRC MOU are available.
- Review the MOU to develop a general understanding of the agreements between the NRC and OSHA, DOT, FEMA, and DOE. For regional inspectors, review any MOU between the NRC and the States in your region.
- Read the NRC's Tribal Policy Statement.
- Review MD 5.2, Appendix A.
- Take the TMS Training listed in the reference section of this ISA.
- Identify the government liaison for Tribal Nations and Federal/State agencies in your region or office.
- Discuss with your regional or office government liaison, your role in interacting with Tribal Nations. Also discuss the current status of engagement with tribes in the region.
- Meet with your supervisor, an experienced inspector, or the above government liaison representative to discuss two issues that involved interface with other Federal or State agencies. Discuss how the agency addressed the issues in the context of the applicable NRC MOU and office guidance.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-10.

(ISA-11) Interaction with the Public

PURPOSE:

The purpose of this activity is to acquaint you with the expectations for NRC inspectors when dealing with members of the public. Responsiveness and openness are essential to the agency's ability to fulfill its goal of enhancing openness. A qualified inspector will have many opportunities to interact with the public. This ISA will help you to understand NRC procedures, policies, and available resources related to interaction with the public.

COMPETENCY AREA: COMMUNICATION
SELF-MANAGEMENT
REGULATORY FRAMEWORK

LEVEL OF EFFORT: 6 hours

REFERENCES:

- NUREG/BR-0215, "Public Involvement in the Nuclear Regulatory Process," Revision 2
- NUREG/BR-0297, "NRC Public Meetings"
- MD 3.4, "Release of Information to the Public"
- MD 3.5, "Attendance at NRC Staff-Sponsored"
- MD 8.11, "Review Process for 10 CFR 2.206 Petitions"
- NRC external Web site "Petition the NRC to Take an Enforcement Action"
(<https://www.nrc.gov/about-nrc/regulatory/enforcement/petition.html>)
- Regional or office guidance related to interaction with the public (e.g., conduct of public meetings, response to inquiries from the public, release of information to the public)
- NRC external Web site "Plain Writing at the NRC"
(<https://www.nrc.gov/public-involve/open/plain-writing.html>)

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of proper interaction with the public by successfully addressing the following:

1. Describe the expectations of NRC employees regarding answering telephone calls, emails or text messages that involve inquiries from a member of the public.
2. Name some resources available to assist you in responding to the following types of public inquiries:
 - a. general questions about NRC organization and functions
 - b. general questions about a technical topic such as radioactive particles
 - c. questions about a licensed facility's performance or an NRC inspection

- d. Questions on a specific technical issue of current interest
3. Describe what is meant by “plain language.” Identify where examples and guidance related to plain language can be found.
4. Explain what a “2.206 petition” is. Describe how submit and how the NRC reviews 2.206 petitions. Be aware of the NRC’s 2.206 guidance. Describe how other public inquiries, including non-allegations, are handled in your region or office.
5. Describe what an NRC employee should do if they are asked to speak (on an NRC-related topic) at a meeting, such as the Lions Club, the local chapter of the American Nuclear Society, or a school.
6. Identify the types of NRC meetings that are generally open to the public. List some that are not usually open to the public.
7. Describe how members of the public can find out about NRC public meetings. Discuss the expectations for timeliness of meeting notices and summaries.
8. Describe the restrictions regarding the release of information to the public, including specific types of information that are not to be released.

TASKS:

- Review the information presented by the NRC Public Affairs Office on interactions with the public that can be found on the NRC internal and external Web sites.
- Review the information available on the external NRC Web site related to general topics of interest to the public, such as public involvement, school programs, and technical information papers.
- Visit and explore the “Public Meetings & Involvement” page on the NRC external Web site (<https://www.nrc.gov/public-involve.html>).
- Locate and review the material specifically listed in the reference section of this activity.
- Review the steps in the rulemaking process on the NRC external Web site under “How We Regulate.” (<https://www.nrc.gov/about-nrc/regulatory.html>)
- Identify, locate, and review the region’s or office’s policy guidance on the staff’s receipt and processing of inquiries from the general public. Meet with your Public Affairs Officer (PAO) and discuss what is expected of an inspector who receives an inquiry.
*Note – This ISA overlaps with ISA-12 Contacts with the Media, which also requires a meeting with your PAO. Please also review ISA-12 before meeting with the PAO.
- Meet with your immediate supervisor or designee and discuss the types of public interactions that inspectors are likely to encounter and ensure that you understand the inspector’s role. Discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-11.

(ISA-12) Contacts with the Media

PURPOSE:

The purpose of this activity is to provide an understanding of the importance of communicating with the public and media in an accurate, clear, and noncomplex manner within the limitations of agency guidance for the release of information to the public. Such communication supports one of the NRC's main objectives—increasing openness. This study activity will provide you with information on the implementation of the guidance on contacts with the public and media.

COMPETENCY AREAS: COMMUNICATION SELF-MANAGEMENT

LEVEL OF EFFORT: 4 hours

REFERENCES:

MD 3.4, "Release of Information to the Public" NUREG/BR-0224, "Guidelines for Conducting Public Meetings"

- NUREG-1614, "Strategic Plan," Latest Version
- NUREG/BR-0308, "Effective Risk Communication"
- January 5, 2011, Yellow Announcement Regarding the Use of Social Media (ML11251A090)
- Regional or office instructions establishing the policy and process for receipt of inquiries from the public or media

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the guidance on contacts with the media by successfully addressing the following:

- Discuss the NRC goal of improving public confidence and how good communication with the media contributes to achievement of this goal.
- Identify the importance of communicating with the media in a manner that builds trust.
- Discuss the importance of agency goals, onsite inspection staff, the agency's safety focus, risk-informed policies, trustworthiness, and limitations on particular subject knowledge with regard to communicating with the media.
- Discuss the importance of planning ahead and preparing well for communicating with the media.
- Discuss the importance of controlling your speech, including what words not to use, not speculating, not guessing, not answering the "what if" questions, not giving your opinion or repeating any other person's opinion, and not talking off the record.

- Describe the policy and process for communicating to management any inquiries from, or unplanned interactions with, the news media and other members of the public.

TASKS:

- Meet with the regional PAO or someone from the Office of Public Affairs at Headquarters to discuss the guidelines for interviews with the news media. *Note – This ISA overlaps with ISA-11 Interaction with the Public, which also requires a meeting with your PAO. Please also review ISA-11 before meeting with the PAO.
- Explore all aspects of the importance of appropriate, accurate, and clear communications with the public as these aspects appear on the NRC Web site.
- Review the agency guidance on how to communicate with the public and media, NRC expectations/requirements regarding the use of social media when conducting NRC activities, and issues that could occur regarding the sharing of information on social media.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-12.

(ISA-13) The Freedom of Information Act and the Privacy Act

PURPOSE:

The purpose of this activity is to provide you with an understanding of how the NRC implements the Freedom of Information Act (FOIA) and the Privacy Act while guarding against the inadvertent and unauthorized release of information. While communication with the public is very important, it must be done within the limitations of agency guidance for the release of information to the public. This supports one of the NRC's main objectives increasing openness. This study activity will provide you with information on the implementation of the guidance on responding to FOIA requests from the public.

COMPETENCY AREAS: COMMUNICATION
SELF MANAGEMENT
REGULATORY FRAMEWORK

LEVEL OF EFFORT: 6 hours

REFERENCES:

- 10 CFR Part 9, "Public Records"
- TMS Training: "FOIA Training for Federal Employees"
- MD 3.1, "Freedom of Information Act"
- MD 3.2, "Privacy Act"
- MD 3.4, "Release of Information to the Public"
- Regional or office instructions establishing the policy and procedure for processing FOIA requests for agency records

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the guidance associated with FOIA and the Privacy Act by successfully addressing the following:

1. Discuss the NRC's goal of improving public confidence and how implementing the provisions of FOIA and the Privacy Act will contribute to achieving that goal.
2. Identify the completeness and timeliness requirements for responding to an FOIA request and discuss how important this responsiveness is in building public trust.
3. Discuss the following responsibilities when responding to an FOIA request:
 - a. Provide all records subject to the request in the agency's possession
 - b. Identify other NRC offices that might have records subject to the FOIA request

- c. Screen the records before their release to ensure that information which should be withheld is properly marked before forwarding to Headquarters
 - d. Support the decision to withhold information by providing the appropriate exemption and “foreseeable harm” statements
4. Identify the type of information that should be withheld from release when responding to a FOIA request, including proprietary, predecisional, and privacy information.
 5. Describe the legal limitations of what can be released to the public and what must be protected under the Privacy Act.
 6. Describe the policy and procedure for processing FOIA requests for agency records.
 7. Discuss the possible consequences associated with maintaining unnecessary electronic or paper copies of licensee documents following completion of an inspection activity.

TASKS:

- Complete the course: “FOIA Training for Federal Employees” within TMS.
- Explore the information made available to the public on the NRC Web site and within ADAMS.
- Review the agency guidance on how to implement FOIA without releasing predecisional information and other information covered under the Privacy Act.
- Meet with the FOIA Coordinator to discuss the procedure for processing FOIA requests for agency records.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor’s or designee’s signature in the line item for Basic-Level Certification Signature Card Item ISA-13.

(ISA-14) Entrance and Exit Meetings

PURPOSE:

Effective communication is critical for overall agency success. For NRC inspectors, the inspection entrance and exit meetings are the primary opportunities to communicate issues to the licensees. Besides communicating effectively, inspectors, as Government officials, have additional requirements to follow during entrance and exit meetings to ensure that proprietary data and safeguarded information are not disclosed, and that information is shared with the public when appropriate. To ensure that issues are discussed in accordance with NRC requirements, the agency has established communication standards that outline how entrance and exit meetings are to be conducted. The purpose of this activity is to introduce the standards for conducting NRC entrance and exit meetings and to allow you to demonstrate an ability to conduct an entrance and exit meeting.

COMPETENCY AREAS: COMMUNICATION
TEAMWORK
INSPECTION

LEVEL OF EFFORT: 6 hours

REFERENCES:

- IMC 2515, "Light-Water Reactor Inspection Program-Operations Phase"
- IMC 0610, "Nuclear Material Safety and Safeguards Inspection Reports"
- IMC 0620, "Inspection Documents and Records"
- Regional or office guidance (if applicable)

EVALUATION CRITERIA:

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

- Locate various guidance documents for conducting NRC entrance and exit meetings.
- Successfully conduct an entrance and exit meeting in accordance with NRC guidance. A mock may be conducted if an actual entrance and exit meeting does not fit the inspector's Basic Qualification timeline.

TASKS:

- Locate and read the guidance for conducting NRC entrance and exit meetings contained in IMC 2515 and regional or office instructions.
- Observe at least one entrance and exit meeting. If possible, observe meetings that have been conducted for a wide range of inspection activities in a variety of locations, such as a public exit meeting.

- Meet with a qualified inspector to have a discussion on expectations for Entrance and Exit Meetings.
- While on inspection, conduct a real entrance and exit meeting with the aid of the lead inspector. If there is not an inspection within the timeline of completing Basic Qualifications, you may alternatively review an inspection report that was recently completed and conduct a “mock” entrance and exit meeting. Discuss the inspection report findings in the presence of your supervisor or a fully qualified inspector designated by your supervisor.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor’s or designee’s signature in the line item for Basic-Level Certification Signature Card Item ISA-14.

(ISA-15) Documenting Inspection Findings

PURPOSE:

NRC inspection reports serve many important functions. In addition to serving as a vehicle to communicate inspection findings to a licensee, inspection reports form part of the historical record of NRC activities at a licensed site. To that end, it is vital for inspection reports to clearly document the results of inspection activities conducted. To assist inspectors in the preparation of inspection reports, the NRC has developed several guidance documents that outline what information should be documented in an inspection report and how that information should be presented. The purpose of this activity is to introduce the standards for preparing NRC inspection reports and to allow you to demonstrate an understanding of the applicable inspection report documentation requirements.

COMPETENCY AREAS: INSPECTION
SELF-MANAGEMENT
COMMUNICATION
TEAMWORK
ASSESSMENT AND ENFORCEMENT

LEVEL OF EFFORT: 20 hours

REFERENCES:

- IMC 0610, "Nuclear Material Safety and Safeguards Inspection Reports"
- Memorandum to NMSS and Regional Administrators from NMSS Office Director, "Office of Nuclear Material Safety and Safeguards Implementation of Very Low Safety Significance Issue Resolution Process," dated July 3, 2023 (ML22353A596)
- IMC 0611, "Power Reactor Inspection Reports"
- "Plain Language Action Plan" Web site, which references NUREG-1379, "NRC Editorial Style Guide," the directives from the President of the United States, and other related documents (internal): <http://www.internal.nrc.gov/NRC/PLAIN/index.html>
- IMC 0620, "Inspection Documents and Records"
- IMC 0612, "Issue Screening"
- IMC 0612, Appendix B, "Issue Screening Directions"
- IMC 0612, Appendix E, "Examples of Minor Issues"
- IMC 0612, Appendix G, "Emergency Planning Cornerstone - Specific Supplemental Guidance for Appendix B Screening Figures 1 and 2"
- Regional or office guidance (as applicable)

EVALUATION CRITERIA:

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

- Locate guidance documents for preparing NRC inspection reports.
- Verify that an inspection report was written in accordance with the applicable NRC guidance.
- Explain the threshold for documenting licensee- and NRC-identified issues in NRC inspection reports.
- Define inspection working files and indicate what should be captured in ADAMS, ultimately destroyed, or referenced in the inspection report.

Describe when to use IMC 0610 versus IMC 0612 when documenting inspection findings.

TASKS:

- Locate and read the guidance for documenting inspection findings. NRC IMCs and regional or office instructions will contain the necessary information.
- Locate and read the guidance for documenting violations. NRC IMCs and regional or office instructions will contain the necessary information.
- Review flow charts in Figure 1 and 2 of IMC 0612, Appendix B and understand when an issue is documented in the following categories: an unresolved item, a violation for which enforcement discretion is exercised, a traditional enforcement violation, a finding with a cross-cutting aspect, and as a licensee-identified non-cited violation in section 4OA7 of the report.
- Select recently completed inspection reports prepared in your region or office that contain (1) an NRC-identified finding, (2) a licensee-identified finding, (3) an NRC-identified violation, and (4) a licensee-identified violation. Compare the inspection report format and content to the report preparation guidance contained in either NRC IMC 0610 or IMC 0611/IMC 0612 and to any applicable regional or office guidance. Through review of the guidance, as well as conversations with the report author, verify that the report was prepared in accordance with the requisite report preparation guidance.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-15.

(ISA-16) Environment for Raising Concerns & Ways to Raise Differing Views

PURPOSE:

The purpose of this activity is to communicate the agency's policy on establishing and maintaining an environment that supports raising concerns and differing views and to provide guidance on the informal and formal processes for pursuing resolution of differing views that are directly related to the NRC's mission. The NRC strives to establish and maintain an environment that encourages all NRC employees and contractors to raise concerns and differing views promptly, without fear of reprisal, through various mechanisms. The free and open exchange of views or ideas conducted in a non-threatening environment provides the ideal forum where concerns and alternative views can be considered and addressed in an efficient and timely manner that improves decision-making and supports the agency's safety and security mission. All NRC employees and contractors are expected to discuss their views and concerns with their immediate supervisors on a regular, ongoing basis. These informal discussions should be enough to resolve most issues. However, if informal discussions do not resolve concerns, employees have various mechanisms for expressing and having their concerns and differing views heard and considered by management, including the Open Door Policy, the Non-Concurrence Process (NCP), and the Differing Professional Opinion (DPO) Program. This activity will provide you with an understanding of these processes.

COMPETENCY AREAS: INSPECTION
SELF-MANAGEMENT
COMMUNICATION

LEVEL OF EFFORT: 2 hours

REFERENCES:

- NCP Web site: <https://usnrc.sharepoint.com/teams/NRC-Non-Concurrence-Process>
- DPO Program Web site: <https://usnrc.sharepoint.com/teams/NRC-Differing-Professional-Opinions>
- MD 10.160, "Open Door Policy"
- MD 10.158, "NRC Non-Concurrence Process"
- MD 10.159, "The NRC Differing Professional Opinions Program"
- TMS Training: The Non-Concurrence Process (NCP)
- TMS Training: Differing Professional Opinion (DPO) Program

Regional or office instructions establishing additional implementing guidance for raising differing views (if applicable)

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the NRC processes for raising concerns and differing views by successfully addressing the following:

- Discuss under what circumstances the various methods available for expressing differing views would be used.
- Describe the Open Door Policy.
- Describe the key features of the NCP.
- Describe the key features of the DPO Program.
- Describe the type of information available on the NCP and DPO Program Web Site on the NRC internal page under Office of Enforcement. (<https://intranet.nrc.gov/oe>)

TASKS:

- Explore information and guidance for Open Door Policy, NCP, and DPO Program on identified Web Sites.
- Complete NCP training in TMS
- Complete DPO Training in TMS
- Review MD 10.160, MD 10.158, and MD 10.159.
- Meet with your immediate supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-16.

(ISA-17) Overview of 10 CFR Part 72

PURPOSE:

The purpose of this activity is to acquaint you with the regulations that specify the requirements for all aspects of the construction and operation of an ISFSI. This ISA will help you to understand the content 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste," and how to locate the specific requirements related to these regulations.

COMPETENCY AREA: REGULATORY FRAMEWORK

LEVEL OF EFFORT: 6 hours

REFERENCES:

- NRC internal home page
- 10 CFR Part 72

EVALUATION CRITERIA:

Upon completion of the tasks in this activity, you will be asked to demonstrate your understanding of the general content of 10 CFR Part 72 by successfully discussing the following:

- State the purpose of 10 CFR Part 72.
- Given a specific subject, identify which section in 10 CFR Part 72 discusses the requirements for that subject by using the search feature on the NRC "Regulations" and "Nuclear Regulatory Legislation" Web pages.

TASKS:

- Become familiar with, and be able to use, the search feature to locate the information available in NRC "Regulations" and "Nuclear Regulatory Legislation" Web pages found on the NRC internal Web site.
- Read and be familiar with 10 CFR Part 72.
- Discuss the differences between a general license and specific license under 10 CFR Part 72.
- Meet with your immediate supervisor or the person designated to be your resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-17.

(ISA-18) Overview of 10 CFR Part 19 and 10 CFR Part 20

PURPOSE:

The purpose of this activity is to familiarize you with 10 CFR Part 19, "Notices, Instructions and Reports to Workers: Inspection and Investigations," and 10 CFR Part 20, "Standards for Protection against Radiation." These regulations will provide a perspective on conducting inspections in the working environment of a nuclear reactor. This ISA will help you to understand the purpose of 10 CFR Part 19 and 10 CFR Part 20 and provide you with some basic knowledge that all NRC inspectors will use when conducting inspections in controlled areas containing radioactive material.

COMPETENCY AREA: REGULATORY FRAMEWORK

LEVEL OF EFFORT: 4 hours

REFERENCES:

- NRC internal Web page: "Information Resources—Regs (10 CFR) NRC-maintained—Part 19 and Part 20"

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your general understanding of 10 CFR Part 19 and 10 CFR Part 20 and why these regulations are important for all inspectors by successfully addressing the following:

- Describe the purpose of 10 CFR Part 19.
- Identify the section of 10 CFR Part 19 that describes the rights of radiation workers if they believe a violation of radiological working condition requirements has occurred.
- Identify the section of 10 CFR Part 19 that requires a licensee to report doses to workers.
- Describe the purpose of 10 CFR Part 20.
- Identify the relevant section of 10 CFR Part 20 and discuss the various radiological circumstances that would require a licensee to notify the NRC.
- Discuss why it is important for every NRC inspector to have a general understanding of 10 CFR Part 19 and 10 CFR Part 20.
- Discuss the posting requirements for areas containing radioactive materials.

TASKS:

1. Review 10 CFR Part 19 for a general understanding of the following:
 - a. The purpose of 10 CFR Part 19 (19.1)

- b. Requirements for document postings (19.11(d) and (e))
 - c. Requirements for promptly identifying any condition that may cause unnecessary exposure (19.12(a)(4))
 - d. Instructions for individuals in a restricted area that may experience unnecessary exposure to radiation and/or radioactive materials (19.12(a)(5))
 - e. The times the NRC is allowed to inspect a facility (19.14(a))
 - f. Request by workers for an NRC inspection (19.16(a))
2. Review 10 CFR Part 20 for a general understanding of the following:
- a. The purpose of 10 CFR Part 20 (20.1001)
 - b. Occupational dose limits for adults (20.1201)
 - c. Occupational dose limits for members of the public (20.1301)
 - d. Concepts of as low as is reasonably achievable (ALARA) (20.1101)
 - e. Conditions requiring individual monitoring of external and internal occupational dose (20.1502)
3. Meet with your immediate supervisor or the person designated to be your resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-18.

(ISA-19) NRC Safety Culture Program

PURPOSE:

The purpose of this study activity is for you to obtain general knowledge of the NRC's Safety Culture Program. Upon completion of this study activity, you will have the necessary background to apply the Safety Culture Program to the inspection process.

COMPETENCY AREAS: ASSESSMENT REGULATORY FRAMEWORK

LEVEL OF EFFORT: 16 hours

REFERENCES:

- IMC 0305, "Operating Reactor Assessment Program" (focus on cross-cutting issues topics)
- NRC's external Web site:
<http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>
- Safety Culture ROP Training: <https://papaya.nrc.gov/safetyculture/index.html>
- TMS Training: Columbia Accident
- IMC 0310, "Aspects Within the Cross-Cutting Areas"
- IMC 0611, "Power Reactor Inspection Reports"
- SECY-06-122, "Safety Culture Initiative Activities to Enhance the Reactor Oversight Process and Outcomes of the Initiatives"
- IPs 40100, "Independent Safety Culture Assessment Follow-up"; 71152, "Problem Identification and Resolution (PI&R)"; 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area"; 95002, "Supplemental Inspection Procedure for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area"; 95003, "Supplemental Inspection Procedure Repetitive Degraded Cornerstone or Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input"; 71153, "Follow up of Events and Notices of Enforcement Discretion"; 93800, "Augmented Inspection Team"; and 93812, "Special Inspection"
- Safety Culture Policy Statement and Federal Register Notice (ML11146A047)
<https://www.nrc.gov/about-nrc/safety-culture/sc-outreach-edu-materials.html>
- IP 93100; "Safety Conscious Work Environment Issue of Concern Follow-up"
- Safety Culture Case Study User Guide (ML15196A440) and Educational Material
(<https://www.nrc.gov/about-nrc/safety-culture/sc-outreach-edu-materials.html>)
- NUREG 2165, "Safety Culture Common Language"

EVALUATION CRITERIA:

After completing this study activity, you should demonstrate a general understanding of the Safety Culture Program by successfully doing the following:

- State the purpose of the NRC's Safety Culture Program.
- Define "cross-cutting issue."
- Describe a safety-conscious work environment.
- Explain the role of the inspector in the NRC Safety Culture Program.

Explain how to document a safety-significant finding considering the expectations of the NRC's Safety Culture Program. (See the NRR Case Studies listed in the reference section.)

- Discuss general safety culture aspects and the graded ROP approach to recognizing potential weaknesses in licensee safety culture and taking appropriate agency actions.

TASKS:

- Review referenced Safety Culture Training and inspection procedures.
- Define safety culture and safety conscious work environment (SCWE) and discuss why they are important, how they are different, and how they support each other.
- Explain the relationship of the cross-cutting areas with the safety culture aspects.
- Discuss how the causes and cross-cutting aspects would be identified and documented for several current or hypothetical inspection findings.
- Review the Safety Culture Policy Statement. Discuss the nine traits listed in that policy along with the cross-cutting aspects listed in IMC 0310, and the corresponding examples found in NUREG-2165.
- Discuss the agency's graded approach to dealing with potential safety culture issues as licensee performance declines.
- Meet with you supervisor, a qualified operations resident inspector, or a qualified Safety Culture Assessor to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria above.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item ISA-19.

PART II. BASIC-LEVEL ON-THE-JOB ACTIVITIES

The on-the-job training (OJT) activities require you to conduct inspection-related work, under supervision, at an ISFSI. These activities are designed to allow you to observe and perform key inspector tasks under controlled circumstances. Like the ISAs, each of the OJT activities informs you about the following:

Why the activity is important

How much time may be needed to complete the assignment

What you are expected to complete successfully during the activity

Before beginning the activities in this section, you must successfully complete the course work for site access. You can do this in one of two ways. You can complete the NRC site access course and the site-specific requirements for access, or you may complete the site access requirements at a site. Your supervisor will discuss with you the best way to meet the site access requirements.

The following general guidance applies as you complete the on-the-job activities:

You should complete the activities in this section in the order in which they are presented.

You should complete all parts of each activity.

Your supervisor will act as a resource as you complete each activity. Discuss any questions you may have about how a task must be done or how the guidance is to be applied. Your supervisor may also designate other fully qualified inspectors to work with you as you complete the various activities and to sign off the material or training courses you have completed.

You are responsible for keeping track of the tasks you have completed. Be sure to complete all aspects of an OJT activity before meeting with your supervisor for evaluation.

Basic-Level On-the-Job Activity

(OJT-1) Facility Familiarization Tour with a Qualified Inspector

PURPOSE:

The purpose of this activity is to familiarize you with (1) the general layout of a facility and identity of various major equipment, (2) the types of industrial and radiological personal protection requirements and the proper method of complying with these requirements, (3) the use of security procedures, and (4) the proper response to an emergency, if the emergency is declared while you are in the facility. Specific attention should be devoted to the spent fuel pool and ISFSI facility.

COMPETENCY AREAS: INSPECTION
COMMUNICATION
FUNDAMENTAL PLANT DESIGN AND OPERATION
EMERGENCY RESPONSE

NOTE: Completion of this activity may require several facility tours.

LEVEL OF EFFORT: 40 hours

REFERENCES:

- Licensee drawings of the site building layouts
- Certificates of Compliance of the cask systems used at the facility
- Cask system drawings used at the facility

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the general plant layout and inspector behavior in the plant by successfully addressing the following:

- Given a drawing of the site building layout, be able to locate the major facility areas.
- Identify the types of industrial personnel safety equipment that are available and the circumstances under which each piece of equipment should be used.
- Explain how you would know what type or types of radiological protection equipment are required before entering a radiologically controlled area (RCA).
- Given specific scenarios related to security situations, describe the actions the staff should take.
- Given specific scenarios related to emergency response situations, describe the actions the staff should take.

- Given specific scenarios related to health physics situations, describe the actions the staff should take.
- Discuss the type of license (i.e., general or specific) used for storing spent fuel in the facility.

TASKS:

1. Review a drawing(s) of the building layout for the site, including the ISFSI layout, and plan a route for a tour that will include the major areas on the site, such as the following:
 - a. Spent fuel pool and pad
 - b. Turbine building (for power reactor inspectors)
 - c. Engineered safeguards equipment areas
 - d. RCA
 - e. Emergency response facility
 - f. Control room switchyard or electrical distribution system
 - g. Diesel generator rooms or other emergency power supplies
 - h. Other areas deemed appropriate by a qualified inspector
2. Before the tour, discuss the requirements for personal industrial safety equipment with a qualified inspector.
3. Tour the facility with a qualified inspector and locate the major pieces of equipment and facility areas, including, but not limited to, those items described above.
4. Enter the RCA with a qualified inspector and tour the area to observe and/or discuss items such as different radiological control postings, methods of designating areas that have additional radiological control requirements for entry, different radiological control clothing requirements for different areas, use of portal monitors and personal friskers, and monitoring personal dosimetry.
5. During the tour, discuss the proper security procedures for entering the areas discussed above, including the actions to take if a procedural error or violation of security rules is committed or observed.
6. During the tour, discuss the proper response if an emergency is declared while you are in the facility.
7. During the tour, discuss the proper response in the event of a radiological control event or anomaly.
8. Meet with your immediate supervisor or the person designated to be your resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item OJT-1.

(OJT-2) Documenting Inspection Findings Activity

PURPOSE:

The purpose of this activity is to give guidance on content, format, and style for inspection reports. The objectives of this activity are to ensure that inspection reports (1) clearly communicate significant inspection results to licensees, NRC staff, and the public, (2) provide a basis for significance determination and enforcement action, and (3) present information associated with significant inspection findings in a manner that will be useful to NRC management in developing long-term, broad assessments of licensee performance.

COMPETENCY AREA: FUNDAMENTAL PLANT DESIGN AND OPERATION
INSPECTION
COMMUNICATION
TEAMWORK
ASSESSMENT AND ENFORCEMENT

LEVEL OF EFFORT: 45 hours

REFERENCES:

- IMC 0330, "Guidance for NRC Review of Licensee Draft Documents"
- IMC 0610, "Nuclear Material Safety and Safeguards Inspection Reports," or IMC 0612, "Power Reactor Inspection Reports"
- IMC 0609, "Significance Determination Process (SDP)"
- IMC 0609, Attachment "Initial Characterization of Findings"
- IMC 0611, "Power Reactor Inspection Reports"
- IMC 0612, Appendix B, "Issue Screening"
- IMC 0612, Appendix E, "Examples of Minor Issues"
- IMC 0620, "Inspection Documents and Records"
- Enforcement Policy

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of documenting inspection findings by successfully addressing the following:

- Discuss the thresholds for determining which findings should be documented in an inspection report.
- Describe the relationship between an issue of concern, performance deficiency, and cross-cutting aspect.

- Describe standards that could be used to define a performance deficiency and why deviating from these standards may not be a violation of NRC requirements.
- Describe how to process a finding using the screening questions of a particular SDP appendix and the possible outcomes.
- Describe how traditional enforcement (TE) violations are processed. Consider TE violations associated with (and without) a performance deficiency.
- Discuss how to write input to an inspection report.
- Discuss how to write a violation. Contrast the differences in documenting a non-cited violation, an apparent violation, and a violation that is not suitable for evaluation using the SDP.
- Compare the documentation for an inspector-identified violation to that required for a licensee-identified violation (in terms of format, threshold, cross-cutting aspects, tracking, etc.).

TASKS:

- Use IMC 0610, IMC 0611, and IMC 0612 to determine whether an identified issue is above the threshold for documentation.
- Use IMC 0610, IMC 0611, and IMC 0612 to process a finding.
- Use IMC 0610 or IMC 0611, and IMC 0612, and other available guidance, to draft an inspection report input.
- Given a violation of regulatory requirements and the enforcement policy and guidance, write the analysis and enforcement sections for a finding, a violation, a non-cited violation, and a finding with a safety culture cross-cutting aspect.
- Use IMC 0330 and IMC 0620 to describe how to determine the documents that must be included as attachments to an inspection report for the agency record.
- Meet with your immediate supervisor or the person designated to be your resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature in the line item for Basic-Level Certification Signature Card Item OJT-2.

Form A-1: Basic-Level Signature Card and Certification

Inspector's Name:	Employee Initials/Date	Supervisor's Signature/Date
<u>Basic-Level Training Courses</u>		
H-100S, Site Access Training		
G-105, Conducting Reactor Inspections		
NRC: An Agency Overview		
Gathering Information for Inspectors Through Interviews		
Effective Communications for NRC Inspectors		
Media Training Workshop		
Industrial Safety/OSHA – <i>Course Title Subject to Change</i>		
G-205, Root Cause/Incident Investigation Workshop		
<u>Part A-1. Individual Study Activities</u>		
ISA-1 History and Organization of the U.S. Nuclear Regulatory Commission		
ISA-2 Inspector Objectivity, Protocol, and Professional Conduct		
ISA-3 Fitness-for-Duty Rule		
ISA-4 Allegations		
ISA-5 NRC's Response to an Incident at a Nuclear Facility		
ISA-6 Enforcement Program		
ISA-7 Office of Investigations		
ISA-8 Understanding How the Commission Operates		

Form A-1. Basic-Level Signature Card and Certification (continued)

Inspector's Name:	Employee Initials/Date	Supervisor's Signature/Date
<u>Part A-1. Individual Study Activities (continued)</u>		
ISA-9 Organization and Content of the NRC Inspection Manual		
ISA-10 Federal, Tribal, and State Government Relations		
ISA-11 Interactions with the Public		
ISA-12 Contacts with the Media		
ISA-13 The Freedom of Information Act and the Privacy Act		
ISA-14 Entrance and Exit Meetings		
ISA-15 Documenting Inspection Findings		
ISA-16 Environment for Raising Concerns & Ways to Raise Differing Views		
ISA-17 Overview of 10 CFR Part 71 and 72		
ISA-18 Overview of 10 CFR Part 19 and 10 CFR Part 20		
ISA-19 NRC Safety Culture Program		
<u>Part A-2. On-the-Job Training Activities</u>		
OJT-1 Facility Familiarization Tour with a Qualified Inspector		
OJT-2 Documenting Inspection Findings		

This signature card and certification must be accompanied by the appropriate Form A-2: Basic-Level Equivalency Justification, if applicable.

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

Supervisor's Signature: _____ Date: _____

Form A-2. Basic-Level Equivalency Justification

Description of Qualification Requirement	Identify equivalent training and experience for which the inspector is
<u>Basic-Level Training Courses</u>	
NRC: An Agency Overview	
Gathering Information for Inspectors through Interviews	
Effective Communications for NRC Inspectors	
G-105, Conducting Reactor Inspections	
Industrial Safety/OSHA – <i>Name Subject to Change</i>	
Media Training Workshop	
G-205, Root Cause/Incident Investigation Workshop	
H-100S, Site Access Training Self-Study Course (or licensee site access)	
<u>Part A-1. Individual Study Activities</u>	
ISA-1 History and Organization of the U.S. Nuclear Regulatory Commission	
ISA-2 Inspector Objectivity, Protocol, and Professional Conduct	
ISA-3 Fitness-for-Duty Rule	
ISA-4 Allegations	
ISA-5 NRC's Response to an Incident at a Nuclear Facility	
ISA-6 Enforcement Program	
ISA-7 Office of Investigations	
ISA-8 Understanding How the Commission Operates	
ISA-9 Organization and Content of the NRC Inspection Manual	

<u>Part A-1 Individual Study Activities (continued)</u>	
ISA-9 Organization and Content of the NRC Inspection Manual	
ISA-10 Federal, Tribal, and State Government Relations	
ISA-11 Interaction with the Public	
ISA-12 Contacts with the Media	
ISA-13 The Freedom of Information Act and the Privacy Act	
ISA-14 Entrance and Exit Meetings	
ISA-15 Documenting Inspection Findings	
ISA-16 Environment for Raising Concerns & Ways to Raise Differing Views	
ISA-17 Overview of 10 CFR Part 71 and 72	
ISA-18 Overview of 10 CFR Part 19 and 10 CFR Part 20	
ISA-19 NRC Safety Culture Program	
<u>Part A-2. On-the-Job Training Activities</u>	
OJT-1 Facility Familiarization Tour with a Qualified Inspector	
OJT-2 Documenting Inspection Findings	

Supervisor's Signature: _____ Date: _____



Certificate of Completion

This is to certify that



Has successfully completed all of the requirements
for the

**Basic Qualification for a Safety Inspector of
Independent Spent Fuel Storage Installations**

Part B: Technical-Proficiency Level Training and Qualification Journal

PART I. TECHNICAL-PROFICIENCY LEVEL TRAINING AND INDIVIDUAL STUDY ACTIVITIES

Technical-Proficiency Level Training Courses

This part of the Qualification Journal focuses on technical training needed to understand the operations, regulatory requirements, and inspection process of an independent spent fuel storage installation (ISFSI). The following courses can be taken in any order.

Note: Before signing up for any training course, you should verify that you have met the prerequisites.

- Crane Technology (SF-182)
- H-117S, Introductory Health Physics Self-Study Course, or H-122S and H-122L, Fundamental Health Physics
- Concrete Technology and/or Codes Course (E-117)
- Welding Technology and/or Codes Course
- NDE Technology and/or Codes Course (E-306)
- Independent Spent Fuel Storage Installations Self-Study Course (F-220S)

Technical-Proficiency Level Individual Study Activities

The individual study activities (ISAs) are designed to direct and focus your efforts as you begin reviewing documents that will be important to the performance of your job. Each study activity begins with a purpose statement informing you of why the activity is important and how it relates to the job of an inspector. The level of effort has been noted so that you have an idea of how much effort should be expended in completing the activity. (These times are estimates. You may need a little more or a little less time.) You should review the evaluation criteria first to better understand what you should achieve as a result of completing the activity. The evaluation criteria should help you to focus on the relevant information. The tasks outline the items that you must complete to successfully address the evaluation criteria.

The following general guidance applies as you complete the various study activities:

You should complete all parts of each activity.

Your immediate supervisor will act as a resource as you complete each activity. Your immediate supervisor may also designate other fully qualified individuals to work with you and sign off the qualification journal as you complete the material. You should discuss any questions with your supervisor or designated resource.

You are responsible for keeping track of the tasks completed. You should complete all the tasks in each activity before meeting with your immediate supervisor or designee for evaluation.

(ISA-Technical-1) ISFSI Inspection Procedures

PURPOSE:

The purpose of this activity is to introduce you to the content and organization of the U.S. Nuclear Regulatory Commission (NRC) Inspection Manual and how it relates to the ISFSI inspection program. As an inspector, you will be following an inspection program that is defined by an Inspection Manual Chapter (IMC) and implemented by its associated inspection procedures (IPs). This study activity will help you identify and locate inspection procedures that are used in the ISFSI inspection program and to recognize the limitations associated with applying the guidance contained in the procedures. This activity will also introduce you to IMCs establishing policy that will govern some of your actions in implementing the inspection program.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 12 hours

REFERENCES:

- IP 60851, "Design Control of ISFSI Components"
- IP 60852, "ISFSI Component Fabrication by Outside Fabricators"
- IP 60853, "On-Site Fabrication of Components and Construction of an ISFSI"
- IP 60854, "Preoperational Testing of an ISFSI"
- IP 60855, "Operation of an ISFSI"
- IP 60856, "Review of 10 CFR 72.212(b) Evaluations"
- IP 60857, "Review of 10 CFR 72.48 Evaluations"
- IP 60858, "Away-From-Reactor ISFSI Inspection Guidance"
- IP 60859, "ISFSI License Renewal Inspection" – Note: IP Under Development at the time of issuance for this IMC.
- IMC 2690, "Inspection Program for Storage of Spent Reactor Fuel and Reactor-Related Greater-Than-Class C Waste at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings"
- IMC 2691, "Technical Basis for the Independent Spent Fuel Storage Installation Inspection Program"

EVALUATION CRITERIA:

After completing this activity, you should be able to successfully do the following:

1. Identify the NRC IMC that established the ISFSI inspection program.

2. State the purpose of each of the following types of documents located in the NRC IMC:
 - a. IMCs
 - b. IPs
3. Identify when each IP should be used and the purpose of IPs.
4. Discuss an IP used frequently in your region with your supervisor and demonstrate knowledge of the scope and activities required by this procedure.

TASKS:

- Read in detail IMC 2690.
- Be familiar with the contents of IMC 2691.
- Read in detail the IPs used to perform ISFSI inspections.
- Meet with your supervisor or an experienced inspector to discuss the scope of an upcoming inspection and the inspection plan to carry out the requirements of the IP.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-1.

(ISA-Technical-2) Quality Assurance Program

PURPOSE:

This activity will provide you with a working knowledge of the contents of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste," Subpart G, "Quality Assurance Program," industry standards, and the associated licensee programs and documents that collectively establish the basis for the licensee's quality assurance (QA) program.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 12 hours

REFERENCES:

- 10 CFR Part 72, Subpart G and 10 CFR Part 50, Appendix B
- Latest Endorsed Version of American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME) NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities"
- Regulatory Guide 1.28, "Quality Assurance Program Criteria (Design and Construction)"
- Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)"
- Regulatory Guide 7.10, "Establishing Quality Assurance Programs for Packaging Used in Transport of Radioactive Material"
- Licensee Part 50/72 QA program
- NUREG/CR-6407, "Classification of Transportation Packaging and Dry Spent Fuel Storage System Components According to Importance to Safety"
- NUREG/CR-6314, "Quality Assurance Inspections for Shipping and Storage Containers"
- IN 2002-35, "Changes to 10 CFR Parts 71 and 72 Quality Assurance Programs"

EVALUATION CRITERIA:

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

- Discuss the general content of 10 CFR Part 72, Subpart G, and the 18 criteria of a QA program.
- Describe the relationship between the plant license, the ISFSI Certificate of Compliance (CoC), the final safety evaluation report (FSAR), the CoC technical specifications, and 10 CFR Part 72, Subpart G.

- Outline the key elements of an effective QA program, and the licensee's implementation of those elements at a facility.
- Understand the difference of changes that can be made to a Part 50/71 QAP vs. a Part 72 QAP.

TASKS:

1. Review and discuss the 18 criteria of 10 CFR Part 72, Subpart G, with your immediate supervisor or designee, and communicate an understanding of their content and general application to field inspections.
2. Locate the most recent endorsed version of NQA-1.
3. Review the basic regulations in Part 50 and 72 that require a QA program. Review the regulations in Part 50/71 that allow those QA programs to be changed by the licensee without prior NRC review and approval. Review industry standards related to QA. Find the parts of the FSAR, technical specifications, and plant license that address QA. Review a licensee's QA program and the implementing procedures.
 - a. At a site, gain a general understanding of the licensee's QA program through a combination of discussions with a qualified resident inspector and a review of assessments/reports prepared by the licensee QA organization.
4. Explain if the facility QAP can be the same as the ISFSI QAP.
5. Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-2.

(ISA-Technical-3) Problem Identification and Resolution

PURPOSE:

The purpose of this activity is to familiarize you with the licensee programs and documents that were established to meet the requirements for an effective problem identification and corrective action program (CAP), as outlined in 10 CFR 72.172, "Corrective Action" and 10 CFR Part 50, Appendix B, Criterion XVI.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 8 hours

REFERENCES:

- IP 71152, "Problem Identification and Resolution (PI&R)"
- Site-specific documents that describe the licensee's CAP
- 10 CFR 72.172 and 10 CFR Part 50, Appendix B, Criterion XVI

EVALUATION CRITERION:

At the completion of this activity, you should be able to discuss the principal steps in a site's CAP with respect to identification of a condition adverse to quality through final resolution.

TASKS:

- At a licensee site, gain a general understanding of the licensee's CAP through a combination of discussions with a qualified inspector and attendance at routine CAP meetings.
- Using IP 71152 for guidance, review a sample of about six issues entered into the licensee's CAP within the past month, and compare the licensee's actions with regulatory requirements. Discuss the resolution of the issues with the qualified inspector.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criterion section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-3.

(ISA-Technical-4) ISFSI Licensing

PURPOSE:

The purpose of this activity is to familiarize you with some documents used for the licensing of ISFSIs and ways to access these documents during an onsite inspection. These documents describe how a licensee complies with NRC regulations and requirements. This activity will acquaint you with the most common types of licensing documents and show how individual facilities may implement NRC requirements differently, but still comply with the intent of the NRC's regulations.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 24 hours

REFERENCES:

1. NUREG 2215, "Standard Review Plan for Spent Fuel Dry Storage Systems and Facilities"
2. NUREG-1864, "A Pilot Probabilistic Risk Assessment of a Dry Cask Storage System at a Nuclear Power Plant"
3. Management Directive 8.4, "Management of Backfitting Forward Fitting, Issue Finality and Information Requests"
4. Sample CoC
5. Sample technical specification for a CoC and specific ISFSI license
6. Sample dry cask storage system CoC safety evaluation report and SAR
7. Sample of a reactor plant's updated final safety analysis report (any available) and site specific licensed ISFSI final safety analysis report
 - a. IMC 2690, "Inspection Program for Storage of Spent Reactor Fuel and Reactor-Related Greater-Than-Class C Waste at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings," Section 05.15
 - b. NMSS Policy and Procedure 7-05, "Procedures for Processing of Technical Assistance Requests"

EVALUATION CRITERIA:

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

1. Discuss the main areas of review during ISFSI licensing activities.
2. Identify the regulatory enforcement hierarchy that exists between CFR requirements, a facility-specific license, facility-specific technical specifications, a facility-specific updated final safety analysis report and safety evaluation report, and facility-specific procedures.

3. Locate where the following can generally be found:
 - a. Safety limits (facility specific)
 - b. Design-basis accident analysis
 - c. Limiting conditions for operation
 - d. Bases for limiting conditions for operation
 - e. NRC criteria for accepting a safety analysis
 - f. Licensee commitments to various standards
4. Demonstrate an understanding of risk-significant review topics and application of these risk insights to the inspection process.
5. Discuss some lessons learned related to the ISFSI program and interactions with DFM considering discussions in the ISFSI Counterpart Meeting.
6. Explain the purpose of the ISFSI Inspector Counterpart Meeting and the monthly phone call between the regions that implement the ISFSI inspection program and DFM representatives. Understand the inspector's and region's role at these meetings.
7. Explain the process to submit a technical assistance request to DFM to resolve issues encountered during inspections.

TASKS:

- Locate all applicable reference documents.
- Become familiar with the Standard Review Plan to understand aspects of ISFSIs subject to review by the Office of Nuclear Materials Safety and Safeguards.
- Explain the enforceability of licensing documents. Attend an ISFSI Inspector counterpart meeting.
- Become familiar with the TAR process that includes the referenced NMSS procedure and guidance in IMC 2690.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the item listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-4

(ISA-Technical-5) ISFSI Control of Heavy Loads

PURPOSE:

The purpose of this activity is to provide you with information used to formulate and utilize the licensee's control of heavy loads program. This activity will also familiarize you with NRC technical documents and industry standards, as well as generic communications documenting the history and evolution of control of heavy loads at nuclear power plants.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 24 hours

REFERENCES:

- Regulatory Guide 1.244, Revision 0, "Control of Heavy Loads at Nuclear Facilities"
- ANSI/ASME B30.2, "Overhead and Gantry Cranes (Top Running Bridge, Single or Multiple Girder, Top Running Trolley Hoist"
- ASME B30.9, "Slings"
- ANSI N14.6, "Radioactive Materials—Special Lifting Devices for Shipping Containers"
- NUREG-0554, "Single-Failure-Proof Cranes for Nuclear Power Plants," (ML110450636)
- NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants: Resolution of Generic Technical Activity A-36"
- ASME NOG-1-2020, "Rules for Construction of Overhead and Gantry Cranes"
- Generic Letter (GL) 80-113, "Control of Heavy Loads"
- GL 81-07, "Control of Heavy Loads"
- GL 83-42, "Clarification to Generic Letter 81-07 Regarding Response to NUREG-0612, 'Control of Heavy Loads at Nuclear Power Plants'"
- GL 85-11, "Completion of Phase II of 'Control of Heavy Loads at Nuclear Power Plants' NUREG-0612"
- Regulatory Issue Summary (RIS) 05-25, Supplement 1, "Clarification of NRC Guidelines for Control of Heavy Loads"
- IN 03-20, "Derating Whiting Cranes Purchased before 1980"
- IN 09-20, "Degradation of Wire Rope Used in Fuel Handling Applications"
- IN 97-51, "Problems Experienced with Loading and Unloading Spent Nuclear Fuel Storage and Transportation Casks"

- RIS 06-22, “Lessons Learned from Recent 10 CFR Part 72 Dry Cask Storage Campaign”
- Licensee daily, frequent, and periodic ASME B30.2 inspection procedures, if available
- Licensee NUREG-0554 Compliance Matrix, if available
- RIS 2015-13, “Seismic Stability Analysis Methodologies for Spent Fuel Dry Cask Loading Stack-Up Configuration”
- IN19-09, “Spent Fuel Cask Movement Issues”
- IN 14-12: “Crane and Heavy Lift Issues Identified During NRC Inspections”
- Operating Experience Smart Sample (OpESS) 2007/03, Revision 3, “Crane and Heavy Lift Inspection, Supplemental Guidance to IP 71111.20 and IP 71111.13”

EVALUATION CRITERIA:

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

- Demonstrate a knowledge of industry codes and standards pursuant to the control of heavy loads. Specifically, you should be able to demonstrate knowledge of required heavy load inspection frequencies and scopes, requirements for operation of overhead cranes, and general crane design.
- Understand the single-failure-proof crane design acceptance criteria and load drop analysis requirements. In addition, understand the evolution of the requirements for controlling heavy loads.
- Understand the purpose and enforceability of industry standards, as a regulator.
- Understand the purpose of generic communications, as a regulator.
- Understand the purpose and enforceability of a NUREG, as a regulator.

TASKS:

- Review the Standard Review Plan to understand aspects of ISFSIs subject to review by the Office of Nuclear Materials Safety and Safeguards.
- If possible, at a licensee site, perform a crane walkdown of a licensee overhead crane with a qualified inspector observing the licensee’s performance of daily operational checks.
- Review NUREG-0612 and understand its implementation at licensee sites. Read in detail Chapter 5.
- Locate the generic communications provided in the reference section.
- Become familiar with the issues described in the generic communications listed in the reference section.

- Discuss the differences between the types of generic communications.
- Discuss the enforceability of the NRC's documentation (e.g., safety evaluation report, NUREG) and the licensee's (e.g., CoC). Discuss the enforceability of the NRC's documentation (e.g., safety evaluation report, NUREG) and the licensee's (e.g., CoC). Explain how and why industry standards may be used during an inspection. Also, explain what version of the industry standard is used during a particular inspection.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-5.

(ISA-Technical-6) ISFSI Canister Processing

PURPOSE:

The purpose of this activity is to provide knowledge about ISFSI canister processing and technical issues associated with this process.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 16 hours

REFERENCES:

- Bulletin 96-04, "Chemical, Galvanic, or Other Reactions in Spent Fuel Storage and Transportation Casks"
- IN 2011-10, "Thermal Issues Identified During Loading of Spent Fuel Storage Casks"
- IN 2014-08, "Need for Continuous Monitoring of Active Systems in Loaded Spent Fuel Storage Canisters (Including Vacuum Drying Process)"
- RIS 06-22, "Lessons Learned from Recent 10 CFR Part 72 Dry Cask Storage Campaign"
- Legacy SFST-Interim Staff Guidance (ISG) 11, "Cladding Considerations for the Transportation and Storage of Spent Fuel"
- Legacy SFST-ISG 22, "Potential Rod Splitting Due to Exposure to an Oxidizing Atmosphere During Short-Term Cask Loading Operations in LWR or Other Uranium Oxide Based Fuel"

Licensee-specific canister processing procedures

- Dry cask storage system final safety analysis report canister processing operating procedures

EVALUATION CRITERIA:

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

- Understand the steps required for canister processing. Specifically, you should be able to demonstrate knowledge of the order of the canister processing steps and potential safety issues that may arise during these steps.
- Identify the documentation that contains the regulatory requirements for ISFSI canister processing.
- Understand and identify the safety-significant steps during a loading campaign.

TASKS:

- Review the Standard Review Plan to understand aspects of ISFSIs subject to review with respect to Canister Processing by the Office of Nuclear Materials Safety and Safeguards.
- If available, review licensee specific training for canister processing operations.
- Locate and become familiar with the legacy ISG information provided in the reference section of this ISA. Meet with your supervisor or the person designated to be the resource for this activity on their applicability.
- Explain the purpose of canister processing procedures and why these are inspected.
- If possible, at a licensee site with a qualified inspector, observe licensee staff performing canister processing operations.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-6.

(ISA-Technical-7) ISFSI Pad Construction and Design

PURPOSE:

This activity will provide a general understanding of ISFSI pad construction and design. This activity will also familiarize you with relevant documents and issues associated with the construction and design of an ISFSI pad.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 24 hours

REFERENCES:

- American Concrete Institute (ACI)-349, "Code Requirement for Nuclear Safety Related Concrete Structures"
- ACI-318, "Building Code Requirements for Structural Concrete"
- ACI-301, "Specification for Structural Concrete"
- American Society of Civil Engineers (ASCE) 4-16, "Seismic Analysis of Safety-Related Nuclear Structures"
- American Society for Testing and Materials (ASTM) D1196, "Standard Test Method for Nonrepetitive Static Plate Load Tests of Soils and Flexible Pavement Components, for Use in Evaluation and Design of Airport and Highway Pavements"
- ASTM C172, "Standard Practice for Sampling Freshly Mixed Concrete"
- ASTM C94, "Standard Specification for Ready-Mixed Concrete"
- ASTM C31, "Standard Practice for Making and Curing Concrete Test Specimen in Field"
- IN 95-28, "Emplacement of Support Pads for Spent Fuel Dry Storage Installations at Reactor Sites"
- IN 03-16, "Icing Conditions Between Bottom of Dry Storage System and Storage Pad"
- IN 08-17, "Construction Experience with Concrete Placement"

EVALUATION CRITERIA:

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

- Understand the steps of ISFSI pad construction before concrete placement and the codes and standards governing each step.
- Demonstrate knowledge of concrete placement at ISFSI pads. Specifically, describe regulatory requirements for placement sampling and testing of concrete as well as placement technique.

- For a site, identify the documentation that contains the regulatory requirements for the design of the ISFSI pad.

TASKS:

- Review industry codes and standards used to govern ISFSI pad construction and design.
- Discuss the purpose and enforceability of industry standards, as a regulator.
- If possible, at a licensee site with a qualified inspector, observe the ISFSI pad: excavation, backfill, compaction, soil testing, rebar placement, concrete placement, and concrete testing.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-7.

(ISA-Technical-8) Radiation Protection

PURPOSE:

The purpose of this activity is to inform you of the regulatory requirements and NRC guidance related to radiation protection applicable to the loading and storage of ISFSI casks.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 12 hours

REFERENCES:

10 CFR 72.104, "Criteria for Radioactive Materials in Effluents and Direct Radiation from an ISFSI or MRS"

- 10 CFR 72.106, "Controlled Area of an ISFSI or MRS"
- Legacy SFST-ISG-13, "Real Individual"
- Legacy SFST-ISG-14, "Supplemental Shielding"
- RG 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure"
- IN 90-33, "Sources of Unexpected Occupational Radiation Exposures at Spent Fuel Storage Pools"
- IN 2015-03, "Improper Operation of Spent Fuel Transfer Cask Neutron Shield Equipment Leading to Elevated Radiation Levels Adjacent to Spent Fuel Transfer Cask"
- Licensee as low as is reasonably achievable (ALARA) plan (if available)

EVALUATION CRITERIA:

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

Understand the ISFSI storage radiation protection regulatory requirements.

Understand and identify the safety-significant canister loading steps that may pose elevated radiation levels to plant workers.

TASKS:

- Review the Standard Review Plan to understand aspects of ISFSIs subject to review in respect to Radiation Protection by the Office of Nuclear Materials Safety and Safeguards.
- Review a licensee's ISFSI loading ALARA plan to evaluate elevated radiation levels during critical ISFSI loading steps.
- Review requirements for ISFSI storage radiation levels.

- Locate and become familiar with the legacy ISG information provided in the reference section of this ISA. Meet with your supervisor or the person designated to be the resource for this activity on their applicability.
- Observe at least one ISFSI loading activity including the radiation protection staff's actions to maintain ALARA principles.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-8

(ISA-Technical-9) ISFSI Canister Sealing

PURPOSE:

The purpose of this activity is to provide general knowledge of the ISFSI canister sealing process.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 16 hours

REFERENCES:

- Legacy SFST-ISG-15, "Materials Evaluation"
- Legacy SFST-ISG-18, Revision 1, "The Design and Testing of Lid Welds on Austenitic Stainless-Steel Canisters as the Confinement Boundary for Spent Fuel Storage"
- Legacy SFST-ISG 25, "Pressure and Helium Leakage Testing of the Confinement Boundary of Spent Fuel Dry Storage Systems"
- IN 2013-07, "Premature Degradation of Spent Fuel Storage Cask Structures and Components from Environmental Moisture"
- ASME Boiler and Pressure Vessel Code (applicable parts of sections III, V, and IX)
- ASNT Nondestructive Testing Handbook Volume 1, "Leak Testing"

EVALUATION CRITERIA:

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

- Demonstrate knowledge of ISFSI canister sealing and nondestructive examination codes and standards.
- Understand the regulatory requirements for testing the spent fuel canister's confinement boundary.

TASKS:

- Review the Standard Review Plan to understand aspects of ISFSIs subject to review with respect to Canister Sealing by the Office of Nuclear Materials Safety and Safeguards.
- If possible, at a licensee site with a qualified inspector, observe ISFSI canister sealing and nondestructive examination activities.
- Locate and become familiar with the legacy ISG information provided in the reference section of this ISA. Meet with your supervisor or the person designated to be the resource for this activity on their applicability.

- Discuss the regulatory requirements for testing the spent fuel canister's confinement boundary and where these requirements may be found.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-9.

(ISA-Technical-10) ISFSI Fuel Selection

PURPOSE:

The purpose of this activity is to provide basic knowledge on the authorized contents that can be loaded in cask systems that will be placed in an ISFSI pad. This activity will also introduce possible conditions of the spent fuel, as well as challenges associated with fuel retrievability.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 12 hours

REFERENCES:

- Legacy SFST-ISG-1, "Damaged Fuel"
- Legacy SFST-ISG-2, "Fuel Retrievability"
- Legacy SFST-ISG-9, "Storage of Components Associated with Fuel Assemblies"
- Legacy SFST-ISG-22, "Potential Rod Splitting Due to Exposure to an Oxidizing Atmosphere During Short-Term Cask Loading Operations in LWR or Other Uranium Oxide Based Fuel"
- IN 99-29, "Authorized Contents of Spent Fuel Casks"
- IN 02-09, "Potential for Top Nozzle Separation and Dropping of a Certain Type of Westinghouse Fuel Assembly"
- NUREG/CR-6831, "Examination of Spent PWR Fuel Rods after 15 Years of Storage"
- Licensee CoC, Approved Contents
- IN 2014-09, "Spent Fuel Storage or Transportation System Misloading"
- IN 2018-01, "Noble Fission Gas Releases During Spent Fuel Cask Loading Operations"

EVALUATION CRITERIA:

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

- Demonstrate knowledge of ISFSI fuel selection criteria.
- Understand some potential hazards during a fuel loading campaign that result from the condition of the spent fuel.

TASKS:

1. Review the Standard Review Plan to understand aspects of ISFSIs subject to review in respect to Fuel Selection by the Office of nuclear Materials Safety and Safeguards.

2. Review a licensee's fuel selection package if available and compare to the CoC approved contents.
3. Become familiar with the information in the reference section and discuss the following:
 - a. What is "damaged fuel"?
 - b. What are some challenges associated with fuel retrievability?
 - c. What does "approved contents" mean?
 - d. What are some of the potential safety and regulatory issues associated with a spent fuel misload?
4. If possible, at a licensee site with a qualified inspector, observe ISFSI fuel loading activities on a refuel bridge.
5. Locate and become familiar with the legacy ISG information provided in the reference section of this ISA. Meet with your supervisor or the person designated to be the resource for this activity on their applicability.
6. Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-10

(ISA-Technical-11) 10 CFR 72.48

PURPOSE:

The purpose of this activity is to provide the information necessary to review evaluations and procedures under 10 CFR 72.48, "Changes, Tests, and Experiments."

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 16 hours

REFERENCES:

- 10 CFR 72.48
- Latest Revision of RG 3.72, "Guidance for Implementation of 10 CFR 72.48, 'Changes, Tests, and Experiment
- IMC 0335, "Changes, Tests, and Experiments"
- NEI 12-04, Revision 2, "Guidelines for 10 CFR 72.48 Implementation"
- IN 97-039, "Inadequate 10 CFR 72.48 Safety Evaluation of Independent Spent Fuel Storage Installations
- Legacy SFST-ISG 21, "Use of Computational Modeling Software"
- License 10 CFR 72.48 procedure (if available)
- RIS 12-05," Clarifying the Relationship Between 10 CFR 72.212 and 10 CFR 72.48 Evaluation"

EVALUATION CRITERIA:

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

- Demonstrate knowledge of the 10 CFR 72.48 process.
- Adequately review licensees' or vendors' 10 CFR 72.48 procedures and verify the procedures are being applied to their 72.48's.

TASKS:

- Review 10 CFR 72.48.
- Review RG 3.72, including Appendices A and B.
- Discuss similarities and differences in the criteria of 10 CFR 72.48 and 10 CFR 50.59, "Changes, Tests and Experiments," with your region's or office's 10 CFR 50.59 expert.

- Locate and become familiar with the legacy ISG information provided in the reference section of this ISA. Meet with your supervisor or the person designated to be the resource for this activity on their applicability.
- Review a 10 CFR 72.48 or 10 CFR 50.59 screening and evaluation.
- Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-11

(ISA-Technical-12) Counterfeit, Fraudulent, and Suspect Items

PURPOSE:

The purpose of this activity is to provide an understanding of the regulations and guidance in place for licensees to prevent, identify, and mitigate counterfeit, fraudulent, and suspect items (CFSI) risks. In addition, the guidance for NRC evaluation of potential CFSI identified is provided.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 2 hours

REFERENCES:

- 10 CFR Part 21
- Regulatory Information Summary 2015-08, "Oversight of Counterfeit, Fraudulent, and Suspect Items in the Nuclear Industry"
- Electric Power Research Institute (EPRI) Technical Report (TR)-1019163, "Plant Support Engineering: Counterfeit, Fraudulent and Substandard Items - Mitigating the Increasing Risk," Revision 1, (ADAMS Accession No. ML14245A079
- GL 89-02, "Actions to Improve the Detection of Counterfeit and Fraudulent Marketed Products"
- NRC internal CFSI Web page: <https://www.nrc.gov/about-nrc/cfsi/guidance.html>
- NRC Nuclepedia Web page on CFSI (internal):
https://nuclepedia.usalearning.gov/index.php/Counterfeit_Fraudulent_and_Suspect_Items

EVALUATION CRITERIA:

Upon completion of this activity, you will be asked to demonstrate your understanding of the licensee's requirements and response to CFSI by successfully addressing the following:

- Discuss which key elements of a licensee's QA program will support prevention, identification, and mitigation of CFSI risks.

TASKS:

- Review the regulations and guidance that address CFSI and be able to define CFSI.
- Review NRC and EPRI guidance in Reference 2 and 3 on CFSI and be able to discuss the relationship between a substandard basic component and CFSI.
- Review the guidance on the Web site in Reference 5 and discuss the implications of RIS 2015-08 on your inspection program.

- Read GL 89-02
- Meet with your immediate supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Item ISA-Technical-12.

PART II. TECHNICAL-LEVEL ON-THE-JOB ACTIVITIES

The on-the-job training (OJT) activities require you to conduct inspection-related work, under supervision, at an ISFSI facility. They are designed to allow you to observe and perform key inspector tasks under controlled circumstances. Like the ISAs, each of the OJT activities informs you of the importance of the activity, the time that might be needed to complete the assignment, and the expectations for successful completion.

Before beginning the activities in this section, you must successfully complete the course work for site access. You can do this in one of two ways. You can complete the NRC site access course and the site-specific requirements for access, or you may complete the site access requirements at a site. Your supervisor will discuss with you the best way to meet the site access requirements.

You should complete three individual types of inspections: (1) pad construction, (2) preoperational testing, and (3) operational.

If you are unable to participate in each type of inspection, you may substitute another ISFSI inspection.

You should complete all practical parts of each activity.

Your supervisor will act as a resource for help in completing each activity. You should discuss any questions about how a task must be done or how the guidance is to be applied. Your supervisor may designate a fully qualified inspector to work with you in completing the various activities and to sign off the OJT as you complete it.

You are responsible for keeping track of the tasks completed. You should complete all aspects of an OJT activity before your immediate supervisor's evaluation.

(OJT-1, -2,-3, and -4) Inspection Activities

PURPOSE:

The purpose of this activity is to familiarize you with inspection tasks commonly performed by an inspector. These OJTs will prepare you to independently plan and conduct the baseline inspection program, as defined in the applicable IMC.

COMPETENCY AREAS: INSPECTION
COMMUNICATION
TEAMWORK
SELF-MANAGEMENT

LEVEL OF EFFORT: Note: The objective of this activity is to make sure that you have experienced the full range of inspection activities. The time needed to complete the tasks will depend on your proficiency.

REFERENCES:

- IP 60853, "On-Site Fabrication of Components and Construction of an ISFSI"
- IP 60854 "Preoperational Testing of an ISFSI"
- IP 60855 "Operation of an ISFSI"
- IP 60856, "Review of 10 CFR 72.212(b) Evaluations"
- IP 60857, "Review of 10 CFR 72.48 Evaluations"
- IP 60858, "Away-From-Reactor ISFSI Inspection Guidance"
- IMC 2690, "Inspection Program for Storage of Spent Reactor Fuel and Reactor-Related Greater-Than-Class C Waste at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings"

EVALUATION CRITERIA:

Upon completion of this activity, you should be able to do the following:

1. Understand the baseline inspection process.
2. Describe the contents and purpose of the site-specific inspection plan.
3. Describe the purpose of the inspection planning call.
4. Develop a specific inspection plan and provide it to your immediate supervisor.
5. Describe the purpose and contents of a specific inspection plan.
6. Discuss the documents to be reviewed, including their content and purpose, before an inspection.

7. Describe the activities accomplished by the staff during the inspection(s) and their purpose.
 - a. Entrance meeting
 - b. Management briefing and exit prebriefing of licensee management
 - c. Exit meeting

TASKS:

1. Perform the following four inspection accompaniments to complete OJT-1 through 4.
 - a. ISFSI pad inspection
 - b. ISFSI preoperational testing inspection
 - c. ISFSI 72.212 review inspection
 - d. ISFSI operational inspection
2. Review the annual or applicable site-specific inspection plan to understand how the staff's inspection effort fits into the overall plan.
3. Participate in an inspection planning call to the licensee.
4. Participate in developing the inspection-specific plan.
5. Review the following documents to understand how they provide background information, current issues, and areas for emphasis and support for the inspection effort you plan to accomplish:
 - a. Previous inspection reports
 - b. Appropriate licensee documents
 - c. Applicable inspection procedures
 - d. Other applicable documents (e.g., performance indicators, licensee event reports, information notices, and bulletins)
6. Observe and participate in an entrance meeting.
7. During a planned inspection, perform the following tasks:
 - a. Observe implementation of inspection procedures
 - b. Observe interviews and discussion with facility personnel
 - c. Observe facility work activities
 - d. Review documentation and records
 - e. Discuss inspection results with facility personnel
8. Observe and participate in a briefing to NRC management.
9. Observe and participate in an exit prebriefing of licensee management.
10. Observe and participate in an exit meeting.
11. Perform the following tasks in an inspection:

- a. draft a portion of the inspection-specific plan
- b. conduct activities described in Task 6 above, as appropriate
- c. conduct a portion of the following:
 - i. Entrance meeting
 - ii. Briefing of NRC management
 - iii. Prebriefing of licensee management
 - iv. Exit meeting

12. Meet with your supervisor or the person designated to be the resource for this activity to discuss the items listed in the evaluation criteria section.

DOCUMENTATION: You should obtain your immediate supervisor's or designee's signature on Items OJT-1, 2, 3, and -4.

Form B-1: Technical-Proficiency Level Signature Card and Certification

Inspector's Name:	Employee Initials/Date	Supervisor's Signature/Date
<u>Technical-Proficiency Level Training Courses</u>		
Crane Technology (SF-182)		
H-117S, Introductory Health Physics Self-Study Course, or H-122S and H-122L, Fundamental Health Physics		
Concrete Technology and/or Codes Course (E-117)		
Welding Technology and/or Codes Course		
NDE Technology and/or Codes Course (E-306)		
Independent Spent Fuel Storage Installations Self-Study Course (F-220S)		
<u>Part B-1. Individual Study Activities</u>		
ISA-1 ISFSI Inspection Procedures		
ISA-2 Quality Assurance Program		
ISA-3 Problem Identification and Resolution		
ISA-4 ISFSI Licensing		
ISA-5 ISFSI Control of Heavy Loads		
ISA-6 Canister Processing		
ISA-7 ISFSI Pad Construction and Design		
ISA-8 Radiation Protection		
ISA-9 ISFSI Canister Sealing		
ISA-10 ISFSI Fuel Selection		
ISA-11 10 CFR 72.48		
ISA-12 Counterfeit, Fraudulent, and Suspect Items		

Part B-2. On-the-Job Training Activities		
OJT-1 ISFSI Pad Inspection Accompaniment		
OJT-2 ISFSI Preoperational Testing Accompaniment		
OJT-3 ISFSI 72.212 Review Accompaniment		
OJT-4 ISFSI Operational Accompaniment		

This signature card and certification must be accompanied by the appropriate Form B-2: Technical-Proficiency-Level Equivalency Justification, if applicable

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

Supervisor's Signature: _____ Date: _____

Form B-2: Technical-Proficiency-Level Equivalency Justification

Description of Qualification Requirement	Identify equivalent training and experience for which the inspector is to be given credit.
<u>Technical-Proficiency Level Training Courses</u>	
Crane Technology (SF-182)	
H-117S, Introductory Health Physics Self-Study, or H-122S/H-122L, Fundamental Health Physics	
Concrete Technology and/or Codes Course (E-117)	
Welding Technology and/or Codes Course	
NDE Technology and/or Codes Course (E-306)	
Independent Spent Fuel Storage Installations Self-Study Course (F-220S)	
<u>Part B-1. Individual Study Activities</u>	
ISA-1 ISFSI Inspection Procedures	
ISA-2 Quality Assurance Program	
ISA-3 Problem Identification and Resolution	
ISA-4 ISFSI Licensing	
ISA-5 ISFSI Control of Heavy Loads	
ISA-6 Canister Processing	
ISA-7 ISFSI Pad Construction and Design	
ISA-8 Radiation Protection	
ISA-9 ISFSI Canister Sealing	
ISA-10 ISFSI Fuel Selection	
ISA-11 10 CFR 72.48	
ISA-12 Counterfeit, Fraudulent, and Suspect Items	

<u>Part B-2. On-the-Job Training Activities</u>	
OJT-1 ISFSI Pad Inspection Accompaniment	
OJT-2 ISFSI Preoperational Testing Accompaniment	
OJT-3 ISFSI 72.212 Review Accompaniment	
OJT-4 ISFSI Operational Accompaniment	

Supervisor's Signature: _____ Date: _____

Revision History for IMC 1246, Appendix B3

Commitment Tracking Number	Accession No. Issue Date Change Notice	Description of Change	Training Needed	Training Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional Non-Public Information)
N/A	ML112650062 11/07/11 CN 11-028	To develop an agencywide training for Independent Spent Fuel Storage Safety Inspectors. This is the first version of this document, which was developed with support of the regions.	Yes	N/A	ML112650068
	ML23326A085 12/15/23 CN 23-037	The document is a new update revision and revised to incorporate CFSI guidance.	N/A	N/A	ML23326A086
	ML24212A333 10/16/24 CN 24-028	Added IMC 1245 Appendix C3 qualified inspectors to scope of cross qualification.	N/A	N/A	N/A