

NRC INSPECTION MANUAL

NMSS/DFM

INSPECTION MANUAL CHAPTER 1247 APPENDIX B

GENERAL PROFICIENCY-LEVEL TRAINING AND QUALIFICATION JOURNAL

Effective Date: July 1, 2024

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INTRODUCTION

You may complete the General Proficiency requirements together with the Technical Proficiency requirements for your specific inspector classification. You may begin the Technical Proficiency requirements before you complete Basic Inspector Qualification at your Supervisor's discretion.

REQUIRED GENERAL PROFICIENCY TRAINING COURSES

- Effective Communication for NRC Inspectors
- Gathering Information for Inspectors through Interviews
- Media Training Workshop
- G-205, Root Cause/Incident Investigation Workshop
- G-103, Field Techniques and Regulatory Processes

Before signing up for any course, **verify** that you have met **the** prerequisites.

All inspector types except **Physical Security, Information Security, and Material Control and Accounting (MC&A)** must complete the following General Proficiency Training:

- F-102S, General HP Practices for Fuel Cycle Facilities **Self-Study Course**
- F-204S, Uranium Enrichment Processes **Self-Study Course**
- P-400, Introduction to Risk Assessment **for Materials Safety and Waste Management. If P-400 is not being offered, P-105, PRA Basics for Regulatory Applications can be taken as a substitute.**
- **A Hazards Analysis (ISA) training course:**
 - **"Hazard and Accident Analysis" course by ABS Group,**
 - **"PHA/HAZOP Leadership" course by the Process Improvement Institute, or**
 - **Any course recommended by the NRC training center to fulfill this training objective**

GENERAL PROFICIENCY INDIVIDUAL STUDY **GUIDES**

The individual study guides (SGs) 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. (Of course, the times are estimates. You may need a little more or a little less time). The evaluation criteria are listed up front so that you will review them first and better understand what you are expected to achieve **from** completing the **activities**. Use the evaluation criteria to help you focus on what is most important. The tasks outline the things you must do to successfully address the evaluation criteria.

General Proficiency Individual Study Guides

(SG-General-1) Quality Assurance Program

PURPOSE:

This activity will provide you with a working knowledge of the contents of quality assurance (QA) programs and program requirements at fuel facilities **that have committed to NQA-1** and will provide you with general knowledge of the associated licensee programs and documents that collectively establish the basis for **those licensees'** QA programs.

COMPETENCY AREAS: INSPECTION REGULATORY FRAMEWORK

LEVEL OF EFFORT: 24 hours

REFERENCES:

- 10 CFR 70.64(a)(1), "Quality Standards and Records"
- 10 CFR 70.62(d), "Management Measures"
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Sections 2, and 11
- ASME NQA-1-2004, "Quality Assurance Requirements for Nuclear Facility Applications"
- Licensee QA program documentation (**i.e., URENCO's QAPD**)
- **Appendix B to 10 CFR 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities"**
- **NRC Regulatory Issue Summary (RIS) 2015-08, "Oversight of Counterfeit, Fraudulent, and Suspect Items (CFSI) in the Nuclear Industry," dated June 24, 2015**
- **Regulatory Guide 3.3, Revision 1, "Quality Assurance Program Requirements for Fuel Reprocessing Plants and for Plutonium Processing and Fuel Fabrication Plants," (ML003740245)**
- 10 CFR 21, "Reporting of Defects and Noncompliance"

EVALUATION CRITERIA:

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

- Discuss the content of 10 CFR 70, Subpart H and NUREG-1520 elements related to management measures.

- Describe the relationship between the plant license, the license application, the safety evaluation report (where applicable), and the Integrated Safety Analysis (ISA) Summary **as it relates to the QA program.**
- Discuss the general content of Appendix B to 10 CFR Part 50 and the 18 criteria contained in the appendix.
- Outline the key elements of an effective QA program, and the licensee's implementation of those elements at your reference site.
- **Discuss concepts in ASME NQA-1-2004, "Quality Assurance Requirements for Nuclear Facility Applications." Licensee URENCO USA (LES) committed to this industry standard during licensing. Discuss how this standard compares to your reference facility's QA commitments made during licensing.**
- **Discuss the NRC position communicated in NRC RIS 2015-08, "Oversight of Counterfeit, Fraudulent, and Suspect Items (CFSI) in the Nuclear Industry".**
- **Discuss the definition of commercial-grade dedication as it applies to the fuel cycle.**

TASKS:

- Review and discuss 10 CFR 70, Subpart H sections related to management measures with your supervisor or a qualified inspector. **Describe your** understanding of their content and application filed inspections.
- Review ASME NQA-1-2004. Find where the license application, Technical Safety Requirements (TSR), ISA Summary, QA plan, and plant license address QA. Review a licensee QA program and the implementing procedures.
- At a **fuel facility** site, gain a general understanding of the licensee's QA program through a combination of discussions with a qualified resident inspector and review of assessments/reports prepared by the licensee QA organization.
- Outline key elements of an effective QA program, and the licensee's implementation of those elements at your reference site.
- **Review 10 CFR 21. Discuss how commercial-grade dedication is related to quality assurance. With your supervisor or a qualified inspector, discuss whether enforcement of this process would be possible since it is included only in the definition section of the regulation. Review the Part 21 Reporting database and find a recent report submitted by a fuel cycle facility.**
- Meet with your supervisor or a qualified inspector to discuss any questions you may have **and to** demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: General Proficiency Qualification Signature Card Item SG-General-1

(SG-General-2) Corrective Action Program

PURPOSE:

This guide will provide you with a working knowledge of the licensee programs and documents that were established to meet the requirements for an effective problem identification and corrective action program, as outlined in a license application.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 20 hours

REFERENCES:

- Inspection Procedure (IP) 88005, "Management Organization and Controls," Sections 02.04 and 03.04
- Inspection Procedure (IP) 88161, "Corrective Action Program Implementation for Fuel Cycle Facilities"
- 10 CFR Part 70.62(a), "Safety Program"
- Site-specific documents that describe the licensee's corrective action program
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Section 11.3.5, "Audits and Assessments"
- **Regulatory Guide 3.75, "Corrective Action Programs for Fuel Cycle Facilities"**

EVALUATION CRITERIA:

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

- Discuss the process steps in your reference site's corrective action program (CAP) with respect to identification of a condition adverse to quality through its final resolution.
- **Understand the differences between a conventional CAP and an NRC-approved CAP.**

TASKS:

- For your reference site, gain a general understanding of the licensee's CAP through a combination of discussions with a qualified **inspector** or resident inspector and attendance at routine CAP meetings, **if possible**.
- Using the IP 88005, "Corrective Action Program Implementation for Fuel Cycle Facilities" for guidance, review a sample of six **to twelve substantive** issues that were entered into the licensee's CAP within the past **year** and compare the licensee's actions with

regulatory requirements. Evaluate the licensee's compliance with their CAP procedures/instructions and regulatory requirements such as: inaccurate or inadequate determinations regarding degraded functionality versus failure of safety significant functions; inadequate follow-up, recurrences, inadequate extent-of-condition efforts, or failure to make required regulatory agency notifications. Discuss the resolution of the issues with a qualified inspector or resident inspector. This review should include the resolution of potential operability issues, if available.

- Meet with your supervisor or the person designated as a resource to discuss any questions that you may have and to demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: General Proficiency Qualification Signature Card Item SG-General-2

(SG-General-3) Technical and Regulatory Issues

PURPOSE:

This guide will familiarize you with various topics of interest that have proven problematic in the past at fuel facilities.-

COMPETENCY AREA: REGULATORY FRAMEWORK
INSPECTION

LEVEL OF EFFORT: 24 hours

REFERENCES:

- Event Notification Reports on the U.S. Nuclear Regulatory Commission (NRC) internal website
- [NMSS Fuel Cycle Operating Experience internal SharePoint Site](#)
- Division training materials about past events
- NRC Information Notices (IN) on the U.S. Nuclear Regulatory Commission (NRC) public website
- Regulatory Information Summaries (RIS) on the U.S. Nuclear Regulatory Commission (NRC) public website
- Generic Issues (GI) (within last 24 months) on the US Nuclear Regulatory Commission (NRC) public website
- NMED Database Content on the U.S. Nuclear Regulatory Commission (NRC) internal website
- Chemical Safety Training from the University of Illinois at Chicago on Hydrofluoric Acid
- Honeywell Special Chemicals Training Presentation on Hydrofluoric Acid
- Interim Guidance - Inspector Duties/Responsibilities During Terrorist-Based Threats/Attacks at Region II Reactor and Fuel Facilities

EVALUATION CRITERIA:

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

- Discuss the general issues and topics presented in the references. -You will be able to exhibit a basic knowledge of the technical/regulatory issues and their application to the NRC.

TASKS:

- Read the INs, RISs, GIs, and event related references.
- Gain a general understanding of the technical/regulatory issues and their applications to the NRC.
- Meet with your supervisor or a qualified inspector to discuss any questions that you may have and to demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: General Proficiency Qualification Signature Card Item SG-General-3

(SG-General-4) Safety Culture

PURPOSE:

This guide will provide you with a working knowledge of the NRC safety culture initiative and how it is addressed in fuel cycle facility oversight.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 20 hours

REFERENCES:

- RIS 2006-13, "Information on the Changes Made to the Reactor Oversight Process to More Fully Address Safety Culture"
- NRC public website; "Safety Culture; Outreach and Education Material" (<https://www.nrc.gov/about-nrc/safety-culture/sc-outreach-edu-materials.html>)
- OE Safety Culture Web Site <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>
- Safety Culture ROP Training (Web-based)
- NUREG/BR-0500, "Safety Culture Policy Statement"
- IP 88161, "Corrective Action Program (CAP) Implementation at Fuel Cycle Facilities, "Appendix A titled "Guidance for Gathering Information on Employee Use of the CAP and Other Avenues to Raise Safety and Security Concerns."
- Review of the Columbia Space Shuttle Accident Training (Web-based)
- COMGBJ-08-0001, "A Commission Policy Statement on Safety Culture"

EVALUATION CRITERIA:

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

- Provide the definition of safety culture.
- Discuss those attributes or elements that are important to safety culture (i.e., safety culture components).
- Discuss general safety culture aspects and the approach to recognizing potential weaknesses in licensee safety culture and taking appropriate agency actions.

TASKS:

- Define safety culture and safety conscious work environment (SCWE) and discuss how they differ and why they are important.
- Discuss the agency's graded approach to dealing with potential safety culture issues as licensee performance declines.
- Meet with your supervisor or the person designated as a resource to discuss any questions that you may have **and to** demonstrate that you can meet the evaluation criteria listed above.

DOCUMENTATION: General Proficiency Qualification Signature Card Item SG-General-4

General Proficiency
On-the-Job Training Activity

(OJT-General-1) Emergency Drill/Exercise Observation

PURPOSE:

The conduct of an emergency drill/exercise allows the licensee to assess emergency response performance and the effective correction of previously identified weaknesses. It permits the evaluation of the level of quality of emergency response training, emergency plan implementing procedures, facility and equipment readiness, personnel performance, organizational and management changes, and communications equipment readiness. This activity will permit you, the observer, to realize the scope of involvement of your particular discipline during a declared emergency at a fuel cycle facility.

COMPETENCY AREAS: REGULATORY FRAMEWORK INSPECTION

LEVEL OF EFFORT: 8 hours

REFERENCES:

- IP 88050, "Emergency Preparedness"
- IP 88051, "Evaluation of Exercises and Drills"
- NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Section 8.
- 10 CFR 70.22(i), 70.32(i), 70.24(a)(3)
- An emergency exercise scenario
- Site emergency plan and applicable emergency preparedness implementing procedures related to drills/exercises

EVALUATION CRITERIA:

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

- Discuss the **federal** guidance for drill/exercise observations as described in IP 88051.
- Identify activities that may occur with regard to your discipline during the performance of an emergency drill/exercise.
- Discuss the NRC's method of evaluating licensee performance during an emergency drill/exercise to determine whether it has met the planning standards of 10 CFR 70.22(i), and demonstrated the capability of providing reasonable assurance that adequate protective measures can be taken in the event of a declared emergency.

TASKS:

- Review IP 88050 and IP 88051 to identify the inspection attributes provided for drill/exercise performance evaluations.
- Review the regulatory requirements with regard to emergency preparedness contained in 10 CFR 70.22(i), 70.32(i), and 70.24(a)(3).
- Obtain an emergency drill/exercise schedule for fuel facilities. **Observe** the drill at the site. Take care not to interfere with licensee performance or evaluation of the drill/exercise. Do not prompt licensee participants or evaluators or provide your observations or conclusions regarding weaknesses or deficiencies during drill/exercise performance. Findings must be held confidential until after the formal licensee critique.
- Obtain and review a copy of a licensee's emergency drill/exercise packet, and emergency plan and implementing procedures. Identify activities that will occur with regard to your discipline during the performance of the emergency drill/exercise and note the licensee expectations for success versus failure.
- **Observe a licensee hotwash and discuss** emergency drill/exercise observations and questions you may have with the lead NRC inspector to understand whether the licensee demonstrated the capability of providing reasonable assurance that adequate protective measures can be taken in the event of a declared emergency and if it has met the planning standards of 10 CFR 70.22(i).
- Meet with your supervisor and/or a qualified emergency preparedness inspector to demonstrate that you can meet the evaluation criteria listed above. This could be accomplished via conference call for staff getting outside of the region.

DOCUMENTATION: General Proficiency Qualification Signature Card Item OJT-General-1

(OJT-General-2) Classification Guides

PURPOSE:

The purpose of this is to familiarize you with classification guides and what information should not be discussed in notes, emails, computer files, and inspection reports.

COMPETENCY AREA: INSPECTION

LEVEL OF EFFORT: 20 hours

REFERENCES:

- IMC 0616, "Fuel Cycle Safety and Safeguards Inspection Reports"
- Classification Guides for Fuel Cycle Facilities **as recommended for** NFS, **BWXT**, URENCO, **ACP**, etc.

EVALUATION CRITERIA:

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

- **Understand the purpose and content of classification guides.**
- Understand what items can be discussed and documented in an inspection report.
- **Use the classification guides as a reference.**

TASKS:

- **Review IMC 0616 to determine how classified information should be used in inspection reports.**
- Discuss with a qualified inspector or reviewer the classification **guides and** what information should not be discussed in notes, emails, computer files, inspection reports, **and during the Licensee Performance Review (LPR).**

DOCUMENTATION: Fuel Facility Criticality Safety Inspector Proficiency-Level Qualification Signature Card, Item OJT-General-2.

General Proficiency-Level Signature Card and Certification

Inspector Name:	Employee Initials/Date	Supervisor's Signature/Date
<u>A.1 Training Courses</u> (all inspector types)		
Effective Communication for NRC Inspectors		
Gathering Information for Inspectors through Interviews		
Media training Workshop		
G-205, Root Cause/Incident Investigation Workshop		
G-103, Field Techniques and Regulatory Processes		
A.2 Training Courses (all inspector types except Security and MC&A)		
F-102S, General HP Practices for Fuel Cycle Facilities		
F-204S, Uranium Enrichment Processes		
P-400, Introduction to Risk Assessment in NMSS		
Hazards Analysis Training		
<u>B. Individual Study Activities</u>		
SG-General-1 Quality Assurance Program		
SG-General-2 Corrective Action Program		
SG-General-3 Technical and Regulatory Issues		
SG-General-4 Safety Culture		
<u>C. On-the-Job Activity</u>		
OJT-General-1 Emergency Drill/Exercise		
OJT-General-2 Classification Guides		

Supervisor's signature indicates successful completion of all required courses and activities listed in this journal.

Supervisor's Signature: _____ Date: _____

Form 1, "General Proficiency-Level Equivalency Justification," must accompany this signature card, if applicable.

Form 1: General Proficiency-Level Equivalency Justification

Inspector Name:	Identify equivalent training and experience for which the inspector is to be given credit
<u>A.1 Training Courses</u> (all inspector types)	
Effective Communication for NRC Inspectors	
Gathering Information for Inspectors through Interviews	
Media training Workshop	
G-205, Root Cause/Incident Investigation Workshop	
G-103, Field Techniques and Regulatory Processes	
<u>A. Training Courses</u>	
F-102S, General HP Practices for Fuel Cycle Facilities	
F-204S, Uranium Enrichment Processes	
P-400, Introduction to Risk Assessment in NMSS	
Hazards Analysis Training	
<u>B. Individual Study Activities</u>	
SG-General-1 Quality Assurance Program	
SG-General-2 Corrective Action Program	
SG-General-3 Technical and Regulatory Issues	
SG-General-4 Safety Culture	
<u>C. On-the-Job Activity</u>	
OJT-General-1 Emergency Drill/Exercise	
OJT-General-2 Classification Guides	

Supervisor's Signature: _____ Date: _____

Attachment 1: Revision History for IMC 1247 Appendix B

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional, Non-Public Information)
	ML090400476 02/18/09 CN 09-006	Researched commitments for 4 years and found none. New inspection manual chapter to specify qualification requirements for NRC fuel facility operations, health physics, emergency preparedness, security, material control and accounting, and construction inspectors.	N/A	ML090400527
N/A	ML12257A123 06/11/14 CN 14-012	This appendix has been revised to update required training and study guides for staff getting qualified as a Fuel Facility inspector.	None	ML12257A123
N/A	ML24080A340 07/01/24 CN 24-018	Revised to update training courses, references, evaluation criteria, and tasks for many SGs and OJTs. Updated for current IMC formatting requirements.	None	N/A