

# **NRC INSPECTION MANUAL**

**NMSS/FCSS**

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MANUAL CHAPTER 1247 APPENDIX B

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GENERAL PROFICIENCY-LEVEL  
TRAINING AND QUALIFICATION JOURNAL

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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, be sure that you have checked and have met any prerequisites.

All inspector types except Security and MC&A must complete the following General Proficiency Training:

- F-102S, General HP Practices for Fuel Cycle Facilities
- F-204S, Uranium Enrichment Processes
- P-404, Hazards Analysis (ISA)
- **P-400, Introduction to Risk Assessment in NMSS**

## General Proficiency Individual Study Activities

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 as a result of completing the activity. 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**

## General Proficiency Individual Study Guide

**TOPIC:** (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 and will provide you with general knowledge of the contents of Appendix B of Title 10 of the Code of Federal Regulations Part 50 (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," industry standards, and the associated licensee programs and documents that collectively establish the basis for the licensee's QA program.

**COMPETENCY AREAS:** INSPECTION  
REGULATORY FRAMEWORK

**LEVEL OF EFFORT:** 12 hours

**REFERENCES:**

1. 10 CFR 70.64(a)(1), "Quality Standards and Records"
2. 10 CFR 70.62(d), "Management Measures"
3. NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Sections 2, and 11
4. ASME NQA-1-2004, "Quality Assurance Requirements for Nuclear Facility Applications"
5. Licensee QA program documentation
6. Appendix B to 10 CFR 50
7. Regulatory Guide 1.33, "Quality Assurance Program Requirements" (ML003739995)

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

1. Discuss the content of 10 CFR 70, Subpart H and NUREG-1520 elements related to management measures.
2. Describe the relationship between the plant license, the license application, the safety evaluation report (where applicable), the plant

technical safety requirements, and the Integrated Safety Analysis (ISA) Summary.

3. Discuss the general content of Appendix B to 10 CFR Part 50 and the 18 criteria contained in the appendix.
4. Outline the key elements of an effective QA program, and the licensee's implementation of those elements at your reference site.

**TASKS:**

1. Review and discuss 10 CFR 70, Subpart H sections related to management measures with your supervisor or a qualified inspector, and communicate an understanding of their content and application filed inspections.
2. 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.
3. At a 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.
4. Outline key elements of an effective QA program, and the licensee's implementation of those elements at your reference site.
5. Meet with your supervisor or a qualified inspector to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

**DOCUMENTATION:**

General Proficiency Qualification Signature Card Item SG-General-1

## General Proficiency Individual Study Guide

<b>TOPIC:</b>	(SG-General-2) Corrective Action Program
<b>PURPOSE:</b>	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 or TSRs.
<b>COMPETENCY AREA:</b>	INSPECTION
<b>LEVEL OF EFFORT:</b>	20 hours
<b>REFERENCES:</b>	<ol style="list-style-type: none"><li>1. Inspection Procedure (IP) 88005, "Management Organization and Controls," Sections 02.04 and 03.04.</li><li>2. Inspection Procedure (IP) 88XXX, "Corrective Action Program Implementation for Fuel Cycle Facilities"</li><li>3. 10 CFR Part 70.62(a), "Safety Program"</li><li>4. Site-specific documents that describe the licensee's corrective action program.</li><li>5. NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Section 11.3.5, "Audits and Assessments."</li></ol>
<b>EVALUATION CRITERIA:</b>	<p>At the completion of this guide, you should be able to do the following:</p> <ol style="list-style-type: none"><li>1. Discuss the principle steps in your reference site's corrective action program (CAP) with respect to identification of a condition adverse to quality through its final resolution.</li></ol>
<b>TASKS:</b>	<ol style="list-style-type: none"><li>1. For your reference site, gain a general understanding of the licensee's CAP through a combination of discussions with a qualified resident inspector and attendance at routine CAP meetings.</li><li>2. Using the appropriate IP ( i.e. 88005 the Corrective Action Program Implementation for Fuel Cycle Facilities IP) for guidance, review a</li></ol>

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 a qualified inspector or resident inspector. This review should include the resolution of potential operability issues, if available.

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

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



## General Proficiency Individual Study Guide

**TOPIC:** (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:**
1. Event Notification Reports on the U.S. Nuclear Regulatory Commission (NRC) internal website
  2. Division training materials about past events
  3. NRC Information Notices (IN) [on the U.S. Nuclear Regulatory Commission \(NRC\) public website](#)
  4. Regulatory Information Summaries (RIS) [on the U.S. Nuclear Regulatory Commission \(NRC\) public website](#)
  5. Generic Issues (GI) (within last 24 months) [on the US Nuclear Regulatory Commission \(NRC\) public website.](#)
  6. NMED Database Content [on the U.S. Nuclear Regulatory Commission \(NRC\) internal website](#)
  7. Chemical Safety Training from the University of Illinois at Chicago on Hydrofluoric Acid
  8. Honeywell Special Chemicals Training Presentation on Hydrofluoric Acid
  9. 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:**

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

**DOCUMENTATION:**

General Proficiency Qualification Signature Card Item SG-General-3

## General Proficiency Individual Study Guide

**TOPIC:** (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 the Reactor Oversight Process (ROP). The NRC Fuel Facility safety culture evaluation process is currently under development.

**COMPETENCY AREA:** INSPECTION

**LEVEL OF EFFORT:** 20 hours

- REFERENCES:**
1. RIS 2006-13, "Information on the Changes Made to the Reactor Oversight Process to More Fully Address Safety Culture"
  1. Safety Culture computer based training, modules entitled Training Overview and Safety Culture Background (first 40% of the course), found in the online courses/training section of the NRC's Learning Management System.
  2. Columbia Space Shuttle Accident Report, a case study in safety culture, found on ROP Digital City in the online courses/training section of the NRC's Learning Management System.
  3. Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," and IMC 0612, "Power Reactor Inspection Reports"
  4. SECY-06-122, "Safety Culture Initiative Activities to Enhance the Reactor Oversight Process and Outcomes of the Initiatives" at <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2006/secy2006-0122/2006-0122scy.pdf> (ML061320282)
  5. OE Safety Culture Web Site <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>
  6. SECY04-0111, "Recommended Staff Actions Regarding Agency Guidance in the Areas of Safety Conscious Work Environment and Safety Culture" (ML04) and associated SRM.
  7. SECY05-0187, "Status of Safety Culture Initiatives and Schedule for Near-Term Deliverables" (ML05) and associated SRM.
  8. 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:

1. Provide the definition of safety culture
2. Discuss those attributes or elements that are important to safety culture (i.e., safety culture components)
3. Discuss general safety culture aspects and the graded ROP approach to recognizing potential weaknesses in licensee safety culture and taking appropriate agency actions.
4. Discuss the difference between inspecting to develop the cross-cutting aspect and allegation follow-up.

**TASKS:**

1. Define safety culture and safety conscious work environment (SCWE) and discuss how they differ and why they are important.
2. Explain the relationship of the cross-cutting areas with the safety culture components.
3. Discuss the agency's graded approach to dealing with potential safety culture issues as licensee performance declines.
4. Meet with your supervisor or the person designated as a resource to discuss any questions that you may have as a result of this activity and demonstrate that you can meet the evaluation criteria listed above.

**DOCUMENTATION:**

General Proficiency Qualification Signature Card Item SG-General-4

**General Proficiency**  
**On-the-Job Training Activity**

## General Proficiency On-the-Job Training

**TOPIC:** (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:**
1. IP 88051, "Evaluation of Exercises and Drills"
  2. IP 88050, "Emergency Preparedness"
  3. NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," Section 8.
  4. 10 CFR 70.22(i), 70.32(i), 70.24(a)(3)
  5. An emergency exercise scenario
  6. 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:

1. Discuss the Federal guidance for drill/exercise observations as described in IP 88051.
2. Identify activities that may occur with regard to your discipline during the performance of an emergency drill/exercise.
3. 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:**

1. Review IP 88050 and IP 88051 to identify the inspection attributes provided for drill/exercise performance evaluations.
2. Review the regulatory requirements with regard to emergency preparedness contained in 10 CFR 70.22(i), 70.32(i), and 70.24(a)(3).
3. Obtain an emergency drill/exercise schedule for fuel facilities. If possible, 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.
4. 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.
5. 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).
6. 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

## General Proficiency On-the-Job Training

<b>TOPIC:</b>	(OJT-General-2) Classification Guides
<b>PURPOSE:</b>	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.
<b>COMPETENCY AREA:</b>	INSPECTION
<b>LEVEL OF EFFORT:</b>	20 hours
<b>REFERENCES:</b>	<ol style="list-style-type: none"><li>1. Inspection Manual Chapter (IMC) 0610, "Nuclear Material Safety and Safeguards Inspection Reports"</li><li>2. IMC 0616, "Fuel Cycle Safety and Safeguards Inspection Reports"</li><li>3. Classification Guides for Fuel Cycle Facilities (NFS, B&amp;W, Paducah, URENCO, etc.)</li></ol>
<b>EVALUATION CRITERIA:</b>	Upon completion of the tasks, you should be able to do the following: <ol style="list-style-type: none"><li>1. Understand what items can be discussed and documented in an inspection report.</li></ol>
<b>TASKS:</b>	<ol style="list-style-type: none"><li>1. Discuss with a qualified NCS inspector or reviewer the classification Guides. Describe what information should not be discussed in notes, emails, computer files, and inspection reports.</li></ol>
<b>DOCUMENTATION:</b>	Fuel Facility Criticality Safety Inspector Proficiency-Level Qualification Signature Card, Item OJT-General-2.



**General Proficiency-Level Signature Card and Certification**

<i>Inspector Name: _____</i>	<i>Employee Initials/Date</i>	<i>Supervisor's Signature/Date</i>
<b>A.1 Training Courses (all inspector types)</b>		
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		
<b>A.2 Training Courses (all inspector types except Security and MC&amp;A)</b>		
F-102S, General HP Practices for Fuel Cycle Facilities		
F-204S, Uranium Enrichment Processes		
P-404, Hazards Analysis (ISA)		
P-400, Introduction to Risk Assessment in NMSS		
<b>B. Individual Study Activities</b>		
SG-General-1 Quality Assurance Program		
SG-General-2 Corrective Action Program		
SG-General-3 Technical and Regulatory Issues		
SG-General-4 Safety Culture		
<b>C. On-the-Job Activity</b>		
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.

Copies to:     Inspector  
                   Human Resources Office  
                   Supervisor

<b>Form 1: General Proficiency-Level Equivalency Justification</b>	
Inspector Name: _____	Identify equivalent training and experience for which the inspector is to be given credit
<b>A.1 Training Courses (all inspector types)</b>	
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	
<b>A. Training Courses</b>	
F-102S, General HP Practices for Fuel Cycle Facilities	
F-204S, Uranium Enrichment Processes	
P-404, Hazards Analysis (ISA)	
<b>P-400, Introduction to Risk Assessment in NMSS</b>	
<b>B. Individual Study Activities</b>	
SG-General-1 Quality Assurance Program	
SG-General-2 Corrective Action Program	
SG-General-3 Technical and Regulatory Issues	
SG-General-4 Safety Culture	
<b>C. On-the-Job Activity</b>	
OJT-General-1 Emergency Drill/Exercise	
<b>OJT-General-2 Classification Guides</b>	

Supervisor's Recommendation Signature/Date \_\_\_\_\_

Division Director's Approval Signature/Date \_\_\_\_\_

Copies to: Inspector

Human Resources Office

Supervisor (This form must accompany the signature card and certification, if applicable)

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 and Feedback Resolution Accession Number
	02/18/09 CN 09-006	<p>Researched commitments for 4 years and found none.</p> <p>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.</p>	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