

SECTION XIV
HIGH-LEVEL WASTE REPOSITORY INSPECTOR
NRC INSPECTOR QUALIFICATION JOURNAL

Applicability

This NRC Inspector Qualification Journal implements NRC Manual Chapter 1246, Appendix A, Section XIV, by establishing the minimum training requirements for personnel assigned to perform safety inspection activities at a High-Level Waste (HLW) Repository. The Qualification Journal must provide traceable documentation to show that minimum requirements are met for each inspector.

The NRC Inspector Qualification Journal consists of a series of qualification guides and signature cards. Each signature card is used to document task completion, as indicated by the appropriate signature blocks. Each signature card has a corresponding qualification guide that establishes the minimum knowledge levels or areas of study that must be completed for each signature card.

Most of the qualification guides are divided into sections. The review sections of the qualification guides will identify references with general application to the inspector's qualification. The inspector is expected to have a general familiarity with these references. Other sections of the qualification guides will identify specific references that have direct application to an inspection or licensing discipline. The inspector is expected to demonstrate detailed knowledge of the inspection or licensing discipline-specific references.

To support the review of upper-tier documents, programs, and policies, the inspector's First Line Supervisor may assign one or more specific non-HLW power reactor facilities and/or disposal sites as reference facilities. For a headquarters inspector, the First Line Supervisor should collaborate with NRC Regional Office to set up similar qualification assignment. The selection of a reference facility is intended to provide the inspector's management with the ability to tailor the qualification process to the experience and training level of the inspector, and to meet the inspection and licensing needs of NRC. The use of specific real-world material will reinforce the qualification process.

INSPECTOR QUALIFICATION JOURNAL
High-Level Waste Inspectors

(Name)	(Title)	(Branch)	(Section)
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To complete your qualification as a High-Level Waste (HLW) Inspector, you are to complete the following signature cards. All sign-offs shall include the signature of the responsible reviewer and the date. Maintain these cards in a notebook, along with any background or written material required by the program. This notebook will comprise your NRC Inspector Qualification Journal.

		<u>Signature When Complete</u>	<u>Date</u>
1.	NRC Orientation	<u>First Line Supervisor</u>	<u> </u>
2.	Code of Federal Regulations _	<u>First Line Supervisor</u>	<u> </u>
3.	Office Instructions	<u>First Line Supervisor</u>	<u> </u>
4.	Regulatory Guidance	<u>First Line Supervisor</u>	<u> </u>
5.	Industry Codes and Standards	<u>First Line Supervisor</u>	<u> </u>
6.	NRC Inspection Manual Chapters (MC)	<u>First Line Supervisor</u>	<u> </u>
7.	Inspection Accompaniments _	<u>First Line Supervisor</u>	<u> </u>
8.	NRC Management Directives	<u>First Line Supervisor</u>	<u> </u>
9.	Formal Training	<u>First Line Supervisor</u>	<u> </u>
	Qualification Board Requirement Met	<u>Second Level Supervisor or Board Chairman</u>	<u> </u>
	Recommendation as a qualified inspector	<u>Second Level Supervisor</u>	<u> </u>
	Certification Memo Issued	<u>Second Level Supervisor</u>	<u> </u>

Qualification Card 1
NRC Orientation

A.	Site Orientation	<u>Initials</u>	<u>Date</u>
1.	New employee processing package completed	_____ Employee	_____
2.	Facility tour and introduction	_____ First Line Supervisor	_____
B.	NRC Organization		
1.	Review of NRC Headquarters, Office of Nuclear Materials Safety (NMSS), Division of Waste Management (DWM), and HLW organization	_____ Employee	_____
2.	Discussion of NRC, NMSS, DWM and HLW organization	_____ First Line Supervisor	_____

Qualification Card 2
Code of Federal Regulations (CFR)

	<u>Initials</u>	<u>Date</u>
A. Familiarization with selected CFR parts completed	 _____ Employee	 _____
B. Discussion completed on CFR parts related to waste management	 _____ First Line Supervisor	 _____

Qualification Card 3
Office Instructions

	<u>Initials</u>	<u>Date</u>
A. Familiarization with NMSS/DWM Office policies and procedures (Site and Headquarters)	_____ Employee	_____
B. Discussion completed on NMSS/DWM Office policies and procedures	_____ First Line Supervisor	_____

Qualification Card 4
Regulatory Guidance

	<u>Initials</u>	<u>Date</u>
A. Review of selected regulatory guidance		
1. Regulatory Guides	_____ Employee	_____
2. Information Notices and Bulletins	_____ Employee	_____
3. NUREGs	_____ Employee	_____
4. Generic Letters	_____ Employee	_____
5. Federal Register Notices	_____ Employee	_____
6. Policy and Guidance Directives	_____ Employee	_____
7. Branch Technical Positions	_____ Employee	_____
8. SECY Papers	_____ Employee	_____
B. Discussion of regulatory guidance with application to the DWM HLW Inspector program	_____ First Line Supervisor	_____

Qualification Card 5
Industry Codes and Standards

	<u>Initials</u>	<u>Date</u>
A. Review of selected codes and standards related to HLW storage and disposal completed	_____ Employee	_____
B. Discussion of the application of codes and standards related to HLW storage and disposal in the DWM HLW Inspector program	_____ First Line Supervisor	_____

Qualification Card 6
NRC Inspection Manual Chapters (MC)

	<u>Initials</u>	<u>Date</u>
A. Review of appropriate NRC MCs completed	<hr/> Employee	<hr/>
B. Discussion of NRC MCs and their application to the DWM HLW Inspector program	<hr/> First Line Supervisor	<hr/>

Qualification Card 7
Inspection Accompaniments

		<u>Initials</u>	<u>Date</u>
A.	Inspections completed		
1.	_____ Facility	_____ Employee	_____
2.	_____ Facility	_____ Employee	_____
3.	_____ Facility	_____ Employee	_____
4.	_____ Facility	_____ Employee	_____
B.	Review and discussion by the First Line Supervisor of the inspection and employee's role in the DWM HLW program.		
1.	_____ Facility	_____ First Line Supervisor	_____
2.	_____ Facility	_____ First Line Supervisor	_____
3.	_____ Facility	_____ First Line Supervisor	_____
4.	_____ Facility	_____ First Line Supervisor	_____

Qualification Card 8
NRC Management Directives

Initials

Date

- A. Review of selected portions of
the NRC Management Directives
completed

Employee

- B. Discussion of the application
of the NRC Management Directives
to the DWM HLW Inspector program

First Line Supervisor

Qualification Card 9
Formal Training

A. CORE TRAINING:	<u>Initials</u>	<u>Date</u>
1. Fundamentals of Inspection Course (G-101)	_____ Training Coordinator	_____
2. Root Cause/Incident-Investigation Workshop (G-205)	_____ Training Coordinator	_____
3. Inspecting for Performance Course - Materials Version (G-304)	_____ Training Coordinator	_____
4. Effective Communications for NRC Inspectors (PDC)	_____ Training Coordinator	_____
5. Environmental Monitoring for Radioactivity (H-111)	_____ Training Coordinator	_____
6. Gathering Inspection Information Through Interviews (PDC)	_____ Training Coordinator	_____
7. OSHA Indoctrination Course (G-111)	_____ Training Coordinator	_____
8. Site Access Training (H-100)	_____ Training Coordinator	_____
9. High-Level Waste (HLW) Repository Health Physics Course(H-403) (Available June 2001)	_____ Training Coordinator	_____
10. Risk Assessment for Applications in Nuclear Materials and Waste (Available June 2001)	_____ Training Coordinator	_____
11. Evaluation Techniques for Geological Repository Performance (Form 368)	_____ Training Coordinator	_____

B. SPECIALIZED TRAINING

Other specialized training and/or courses required for inspectors performing inspection activities in specific areas:

	<u>Course Title</u>	<u>Course #</u>	<u>Initials</u>	<u>Initials</u>	<u>Date</u>
-	_____	_____	_____ Supervisor	_____ Training Coordinator	_____
-	_____	_____	_____ Supervisor	_____ Training Coordinator	_____
	_____	_____	_____ Supervisor	_____ Training Coordinator	_____
	_____	_____	_____ Supervisor	_____ Training Coordinator	_____

Qualification Guide 1
NRC Orientation

A. Site Orientation

1. The qualifying individual should read and complete, as appropriate, the following forms for processing into NRC:
 - a. Personnel information
 - b. Health insurance elections
 - c. Retirement plan elections
 - d. Savings elections (e.g., U.S. Savings Bonds, TSP, etc.)
 - e. Fitness for Duty requirements and physical examination
 - F. Any other forms that may be required by NRC Office of Human Resources
 - g. Forms for issuance of tagged, controlled NRC equipment
 - h. Payroll forms and time cards
 - i. Regulatory Information Tracking System (RITS)
2. The First Line Supervisor should orient the qualifying individual to the facility as follows:
 - a. Tour the facility and introduce the qualifying individual to the staff.
 - b. Indicate to the qualifying individual the location of controlled documents, reference material, supplies, office equipment, etc.

B. NRC Organization

1. The qualifying individual should review and become familiar with:
 - a. Organizational charts of region, NMSS, and headquarters and overall NRC organization (NUREG 0325)
 - b. Role of Headquarters in policy and interpretation of regulations
 - c. Role of NRC General Counsel
 - d. Role of NRC Inspector General
 - e. Role of NRC Public Affairs
 - f. Role of NRC Office of Investigations
 - g. Role of NRC Office of Enforcement

- h. Physical location of NRC offices and regions
- i. Role of NRC as a regulatory agency
 - (1) 10 CFR Part 1 (Organization)
 - (2) Atomic Energy Act of 1954, as amended
 - (3) Energy Reorganization Act of 1974, as amended
 - (4) NRC Enforcement Policy (NUREG 1600)
 - (5) Incident Response Plan (NUREGs 0728 and 0845)
 - (6) Energy Policy Act of 1992
 - (7) Nuclear Waste Policy Act 1982, as amended
- 2. The First Line Supervisor should discuss NRC organization and role with the qualifying individual to ensure that the qualifying individual has a full understanding of NRC's organization and mission and the role of the inspector in that mission.

C. HLW Organization

- 1. The qualifying individual should review and become familiar with:
 - a. DWM Organization charts
 - b. Organizational charts of U.S. Department of Energy Headquarters and Yucca Mountain Office
 - c. Yucca Mountain Site Description
 - d. HLW Strategic Plan
 - e. Risk-Informed White Paper
 - f. Issue Resolution Status Reports
 - g. Center for Nuclear Regulatory Analyses Operations Plan
 - h. HLW Executive Director's Office Operations Plans
 - i. HLW Web Page
- 2. The First Line Supervisor should discuss HLW organization and documents with the qualifying individual to ensure that the qualifying individual has a full understanding of the HLW program and the role of the inspector in that program.

Qualification Guide 2
Code of Federal Regulations (CFR)

A. The First Line Supervisor should select some currently applicable CFR Parts. The selection should include the references listed below and be documented. The qualifying individual should be expected to have a general knowledge of the topics addressed in the references. This review may be accomplished by self-study, study quizzes, briefings, or discussions.

- | | | |
|-----|-----------------|---|
| 1. | 10 CFR Part 1 | Statement of organization and general information |
| 2. | 10 CFR Part 2 | Rules of practice for domestic licensing proceedings and issuance of orders |
| 3. | 10 CFR Part 9 | Public Records |
| 4. | 10 CFR Part 19 | Notices, instructions and reports to workers: inspections and investigations |
| 5. | 10 CFR Part 20 | Standards for protection against radiation (includes selected questions and answers, Qs & As) |
| 6. | 10 CFR Part 21 | Reporting of defects and noncompliance |
| 7. | 10 CFR Part 30 | Rules of general applicability to domestic licensing of byproduct material |
| 8. | 10 CFR Part 40 | Domestic licensing of source material |
| 9. | 10 CFR Part 50 | Domestic licensing of production and utilization facilities |
| 10. | 10 CFR Part 51 | Environmental protection regulations for domestic licensing and related regulatory functions |
| 11. | 10 CFR Part 61 | Licensing requirements for land disposal of radioactive waste |
| 12. | 10 CFR Part 62 | Criteria and procedures for emergency access to non-federal and regional low level waste disposal facilities |
| 13. | 10 CFR Part 63 | Proposed Rule: Disposal of High-Level radioactive wastes in a proposed geologic repository at Yucca Mountain, Nevada |
| 14. | 10 CFR Part 70 | Domestic licensing of special nuclear material |
| 15. | 10 CFR Part 71 | Packaging and transportation of radioactive material |
| 16. | 10 CFR Part 72 | Licensing requirements for the independent storage of spent nuclear fuel and High-Level radioactive waste |
| 17. | 10 CFR Part 170 | Fees for facilities and materials, import and export licenses and other regulatory services under the Atomic Energy Act of 1954, as amended |
| 18. | 40 CFR Part 141 | National Primary Drinking Water Regulations |
| 19, | 40 CFR Part 197 | Proposed Rule: Environmental Radiation Protection Standards for Yucca Mountain, Nevada |

20. 40 CFR Part 963 Siting Guidelines

Other CFR's as may be determined by the First Line Supervisor

- B. After the qualifying individual finishes studying the listed CFR Parts, the First Line Supervisor will discuss these parts with the qualifying Inspector. To the extent possible, the supervisor should emphasize recent applications of various sections, new regulatory initiatives, and current industry issues.

Qualification Guide 3
Office Instructions

A. NMSS Office Policies and Procedures

1. Read the NMSS Policy and Procedures Letters:

- 1-3 Handling Request for 10 CFR 2.206 Action
- 1-8 Differing Professional Views and Opinions
- 1-11 Communications with Licensees
- 1-13 Signature Level on NMSS Correspondence
- 1-19 Notification of Regional Administrators
- 1-22 Quality Assurance
- 1-23 Open Meetings
- 1-24 Procedures for: (a) Handling Reports Received from Office of Investigations (OI); (b) Release of NRC Reports and Other Documents and Disclosures of Safety and Security Information to Licensees during Inspection/Investigation Process; (c) Material False Statements and Referral of Other Matters to OI; (d) Reporting the Status of Pending Investigations; (e) Notification of OI of Potential Wrongdoing; (f) Policy for Requesting OI Investigation
- 1-27 Management of Allegations
- 1-33 Procedures for Responding to Requests from the Commission/OGC for Technical Assistance
- 1-37 NMSS Participation in ACNW Reviews
- 1-38 Interface with Commissioners' Offices
- 1-39 Review of Speeches, Papers, and Journal Articles
- 1-40 Legislative and Regulatory Review Requirements for the Office of the Inspector General
- 1-48 Procedures for Preparing Environmental Assessments
- 1-50 Environmental Justice in NEPA Documents
- 1-52 Guidance on Making NRC Electronic Information Available to the Public

2. The qualifying individual should review the NMSS policies and practices regarding:

- a. Travel, including Management Directive 14.1, Official Temporary Duty Travel and use of Government credit card
- b. Telephone use
- c. Policies on use of annual leave and sick leave and excused leave, including Bulletin 4135, Leave Administration
- d. Work schedule, including NRC Appendix 4136, Hours of work and Premium Pay
- e. Use of government equipment, including computers (NUDOCS and ADAMS) and Management Directive 13.1, Property Management
- f. Union activities, including Management Directive 10.102, Labor-Management Relations Program for Federal Employees
- g. Communications outside NRC
- h. Policies on outside employment and acceptance of gifts
- i. Participation in political activities

- j. Routing of mail and procedures for sending mail and materials (via U.S. Mail, Federal Express, etc.), including Management Directive 3.23, Mail Management
- k. Ordering of documents (e.g NUREGs)
- l. NMSS emergency and evacuation procedures
- m. Employee appraisal system and Individual Development Plan (IDP)
 - a. Employee trial period (Management Directive 10.14 Employment and Staffing)
 - (2) Employee appraisals (Management Directive 10.67, Non-SES Performance Appraisal System)
- n. Differing Professional Views or Opinions (Management Directive 10.159, General Personnel Management Provisions)

- B. The First Line Supervisor should discuss these policies and practices with the qualifying individual to ensure that the qualifying individual completely understands them.

Qualification Guide 4
Regulatory Guidance

- A. The First Line Supervisor should select currently applicable regulatory guidance on storage and disposal of HLW. These references should include those listed below and should be documented. The qualifying individual should be expected to have a general knowledge of the topics in the references. The individual can review the topics by self-study, study-quizzes, briefings, or discussions. Note that many Regulatory Guides reference or endorse industry codes and standards listed in Qualification Guide 6. We recommend study of corresponding and sub-tier codes and standards.

1. Regulatory Guides (Use Latest Revision)

1.28	Quality Assurance Program Requirements (Design and Construction)
3.50	Standard Format and Content for a License Application to Store Spent Fuel and High-Level Radioactive Waste
3.71	Nuclear Criticality Safety Standards for Fuels and Material Facilities
8.13	Instruction Concerning Prenatal Radiation Exposure
8.29	Instruction Concerning Risks from Occupational Radiation Exposure

Others as selected by the First Line Supervisor

2. Information Notices(IN) and Bulletins (BL)

IN 79-007	Rupture of Radwaste Tanks
IN 85-092	Surveys of Wastes Before Disposal From Nuclear Reactor Facilities
IN 90-031	Update on Waste Form & High Integrity Container ... Review Status, Identification of Problems With Cement Solidification
IN 90-050	Minimization of Methane Gas in Plant Systems and Radwaste Shipping Containers
IN 91-003	Management of Wastes Contaminated With Radioactive Materials ("Red Bag" Waste and Ordinary Trash)
IN 97-039	Inadequate 10CFR72.48 Safety Evaluations of Independent Spent Fuel Storage Installations
IN 99-029	Authorized Contents of Spent Fuel Casks
BL 75-007	No Title - Involves Exothermic Reaction in Radwaste Shipment
BL 96-004	Chemical, Galvanic, or Other Reactions in Spent Fuel Storage or Transportation Casks

Others as selected by the First Line Supervisor

3. NUREGs (latest revision, where applicable)

NUREG 1298	Qualification of Existing Data for HLW Repositories (February 1988)
NUREG 1318	Items and Activities in the High-Level Waste Geologic Repository Program Subject to Quality Assurance Requirements (April 1988)
NUREG 1495	Overall Review Strategy for the Nuclear Regulatory Commission's High-Level Waste Repository Program (November 1994)
NUREG/BR-0167	Software Quality Assurance Program and Guidelines (February 1993)
NUREG/CR-3714	On the Development of Environmental Radiation Standards for Geologic Disposal of High-Level Radioactive Waste (July 1984)
NUREG/CR-4161	Critical Parameters for a High-Level Waste Repository (Vol. 1: Basalt, May 1985; Vol. 2: Tuff, May 1987; Vol. 3: Salt, July 1987)
NUREG/CR-4369	QA Plan for Computer Software Supporting the U.S. NRC's HLW Management Program (January 1986)
NUREG/CR-4640	Handbook of Software Quality Assurance Techniques Applicable to the Nuclear Industry (August 1987)
NUREG/CR-5398	Technical Basis for Review of HLW Repository Modeling (March 1990)

Add other NUREGS relevant to Yucca Mountain since 1990.

Others as selected by the first line supervisor

4. Generic Letters (GL)

GL 83-007 The Nuclear Waste Policy Act of 1982

Others as selected by the First Line Supervisor

5. Federal Register Notices

As selected by the First Line Supervisor

6. Policy and Guidance Directives

FG-8-08	Scenarios for Assessing Potential Doses Associated with Residual Radioactivity, May 1994
73-01	Instructions for Recording and Reporting Occupational Radiation Exposure Data, Reg. Guide 8.7, June 1992. Superseded by 92-06
73-02	Guide for Administrative Practices in Radiation Monitoring, Reg. Guide 8.2, February 1973.

73-03	Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program, Reg. Guide 8.9, September 1993.
76-01	Acceptable Programs for Respiratory Protection, Reg. Guide 8.15, October 1999.
77-02	Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable, Rev. 1-R, Reg. Guide 8.10, May 1977.
78-03	Laboratory Investigations of Soils for 1.138 Engineering Analysis and Design of Nuclear Power Plants (For comment), Reg Guide 1.138, April 1978.
79-02	Quality Assurance for Radiological Monitoring Programs (Normal Operations)-Effluent Streams and the Environment, Rev. 1, Reg. Guide 4.15, February 1979.
80-03	Air Sampling in the Workplace, Reg. Guide 8.25, June 1992. Superseded by 92-05.
81-04	Audible Alarm Dosimeters, Reg. Guide 8.28, August 1981.
81-05	Instruction Concerning Risks from Occupational Radiation Exposure, Reg. Guide 8.29, February 1996.
81-06	Compilation of Reporting Requirements for Persons Subject to NRC Regulations, Rev. 4, Reg. Guide 10.1, October 1981.
86-03	Establishing Quality Assurance Programs for Packaging Used in the Transport of Radioactive Material, Rev. 1, Reg. Guide 7.10, June 1986.
87-03	Instruction Concerning Prenatal Radiation Exposure, Rev. 3, Reg. Guide 8.13, June 1999.
90-02	Inspection Report Guidance, URFO, May 1990.
91-05	Request for Designation of an Historic Preservation Officer, Memorandum from R.L. Bangart to L.J. Callan, November 1991.
91-07	Review of Environmental Monitoring Data During Inspections, URFO, December 1991.
91-08	Combined List of Abbreviations and Acronyms Most Commonly Used, LLWM, July 1991.
91-09	Guidelines for Handling 10 CFR Part 21 Reports, IMNS, June 1991.
91-10	Assessing External Radiation Doses from Airborne Radioactive Materials, Draft Reg. Guide DG-8005, October 1991.
91-11	Delegation of Authority, Memorandum from R.L. Bangart to J.J. Surmeier, April 3, 1991.
92-04	Guiding Principles for EPA-NRC Cooperation and Decisionmaking, March 1992.
92-05	Air Sampling in the Workplace, Reg. Guide 8.25, Rev. 1, June 1992.

- 92-06 Instructions for Recording and Reporting Occupational Radiation Exposure Data, Reg. Guide 8.7, Rev.1, June 1992.
- 92-07 Radiation Dose to the Embryo/Fetus, Reg. Guide 8.36, July 1992.
- 92-08 Monitoring Criteria and Methods to Calculate Occupational Radiation Doses, Reg. Guide 8.34, July 1992.

HLW Review Plans:

Review Plan for High-Level Waste Repository Quality Assurance Program Descriptions (Revision 2) (March 1989)

Review Plan for NRC Staff Review of DOE Site Characterization Plan Program Reports (August 1990)

Review Plan for NRC Staff Review of DOE Study Plans (Revision 2) (March 1992)

Draft Topical Report Review Plan (Revision 2) (March 1993)

Others as selected by the First Line Supervisor.

7. Branch Technical Position

As selected by the First Line Supervisor.

8. SECY Papers

- 89-319 Implementation of the U.S. Environmental Protection Agency's High-Level Waste Disposal Standards (October 17, 1989)
- 93-013 Analysis of Energy Policy Act of 1992 Issues Related to High-Level Waste Disposal Standards (January 25, 1993)
- 97-279 Generic and Cumulative Environmental Impacts of Transportation of High-Level Waste (HLW) in the Vicinity of an HLW Repository (SRM M970612)
- 97-300 Proposed Strategy for Development of Regulations Governing Disposal of High-Level Radioactive Waste in a Proposed Repository at Yucca Mountain, Nevada
- 98-198 Status of the Issue Resolution process in the High-Level Radioactive Waste Program at Yucca Mountain, Nevada
- 98-225 Proposed Rule: 10 CFR 63, Disposal of High-Level Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, Nevada
- 98-237 Final Rule, Part 2, Subpart J, Procedures Applicable to Proceedings for the Issuance of Licenses for the Receipt of High-Level Radioactive Waste at a Geologic Repository
- 99-074 Staff Review of U.S. Department of Energy Viability Assessment for a High-Level Radioactive Waste Repository at Yucca Mountain, Nevada
- 99-107 Potential Modification of the DOE/NRC MOU Due to Changes in the Hanford Tank Waste Re-mediation System Privatization

- 99-115 Final Rule: Amendments to 10 CFR Part 72 - Miscellaneous Changes to Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste
- 99-186 Staff Plan for Clarifying How Defense-in-Depth Applies to the Regulation of a Possible Geologic Repository at Yucca Mountain, Nevada
- 00-0047 Draft Regulatory Guide Providing Guidance and Examples for Identifying 10 CFR 50.2 Design Bases

Others as selected by the First Line Supervisor.

Qualification Guide 5
Industry Codes and Standards

- A. The First Line Supervisor should select some currently applicable industry codes and standards. The qualifying individual should be expected to have a general knowledge of the topics in the references. He/she may review these by studying, study quizzes, briefings, or discussions. The First Line Supervisor should document the selected standards.
- a. American Society for Testing and Materials (ASTM)

Standard Practice for Prediction of the Long-Term Behavior of Materials, Including Waste Forms, Used in Engineered Barrier System (EBS) for Geological Disposal of High-Level Radioactive Waste,” Designation C-1174-97, West Conshohocken, PA, American Society for Testing and Materials, 1997.

ASTM C26.13 Repository Waste Material Testing
ASTM 26.07 Repository Waste Package Materials
 - b. American Nuclear Society (ANS)

ANS 16.01 Radioactive Waste Leach Testing
 - c. American Society of Mechanical Engineers (ASME)

ASME Code Section III Rules for Construction of Nuclear Plant Components
- B. The First Line Supervisor should test the qualifying individual's knowledge of application of these codes and standards to the HLW program Inspectors' program by discussions, interviews, or oral quizzes.

Qualification Guide 6
NRC Inspection Manual Chapters (MC)

- A. The First Line Supervisor select some currently applicable NRC MC and Inspection Procedure (IP) references with direct application to the HLW program Inspectors. The qualifying individual should study the application of the specific references to the inspection and licensing program in detail.

1. REPORTS/COMMUNICATIONS/FOLLOW-UP

MC 0230	Morning Report
MC 0610	Inspection Reports
MC 0620	Inspection Documents and Records
MC 0720	NRC Bulletins and Information Notices
MC 0801	Inspector Feedback
MC 1120	Preliminary Notifications
IP 92701	Follow-up
IP 92703	Follow-up of Confirmatory Action Letters

2. INSPECTIONS

MC 0300	Announced and Unannounced Inspections
MC 0312	Technical Assistance for Radiation Safety Inspections at Nuclear Fuel Cycle Facilities and Materials Licensees' Sites
MC 1246	Formal Qualification Programs in Nuclear Material Safety and Safeguards Program Area
MC 2800	Materials Inspection Program (Inspection Priorities and Scheduling)

3. INTERACTIONS WITH OTHER FEDERAL AGENCIES

MC 1007	Interfacing Activities between Regional Offices of NRC and OSHA
IP 87102	Maintaining Effluents from Materials Facilities As Low As Is Reasonably Achievable (ALARA) [EPA] ¹

4. INCIDENT RESPONSE

MC 1300	Incident Response Actions - Responsibility and Authority
MC 1301	Response to Radioactive Material Incidents that Do Not Require Activation of the NRC Incident Response Plan
MC 1302	Action Levels for Radiation Exposures and Contamination Associated with Materials Events Involving Members of the Public
MC 1330	Response to Transportation Accidents Involving Radioactive Materials
MC 1360	Use of Physician and Scientific Consultants in the Medical Consultant Program
IP 87103	Inspection of Material Licensees Involved in an Incident or Bankruptcy Filing
IP 93800	Augmented Inspection Team

5. WASTE MANAGEMENT

IP 84101	Radioactive Waste Management
IP 84722	Solid Wastes
IP 84723	Liquids and Liquid Wastes

¹ Required for non-sealed source licensees.

IP 84750 Radioactive Waste Treatment, and Effluent and Environmental Monitoring
IP 84850 Radioactive Waste Management - Inspection of Waste Generator Requirements
of 10 CFR Part 20 and 10 CFR Part 61

6. RADIATION PROTECTION

IP 83726 Control of Radioactive Materials and Contamination, Surveys, and Monitoring
IP 83728 Maintaining Occupational Exposures ALARA
IP 83750 Occupational Radiation Exposure
IP 83822 Radiation Protection
IP 83890 Closeout Inspection and Survey

7. TRANSPORTATION

MC 1330 Response to Transportation Accidents Involving Radioactive Materials

IP 86721 Transportation (Basic)
IP 86740 Inspection of Transportation Activities
IP 86750 Solid Radioactive Waste Management and Transportation of Radioactive
Materials

8. OTHER

MC 1010 Independent Assessment and Analysis
MC 1100 Notification of Significant Meetings
MC 1201 Conduct of Employees
MC 2900 Performance Appraisal Program
MC 2901 Team Inspections

IP 30800 Initial Management Meeting - Materials Licenses
IP 35701 Quality Assurance Program Annual Review

Others as selected by First Line Supervisor

- B. The First Line Supervisor will hold discussions, interviews, or oral quizzes to test the qualifying individual's knowledge and understanding of the applicability of the selected references to the HLW inspectors program.

Qualification Guide 7
Inspection Accompaniments

- A. Each inspector should accompany certified inspectors on at least four inspections.
- B. The following is a guide for material that should be studied and discussed with the inspector in charge during these inspection accompaniments. The First Line Supervisor will discuss these items, as appropriate, after each inspection accompaniment.
 - 1. The Inspection Program
 - 2. Scheduling and Preparation for Inspections
MC 0300 Announced and Unannounced Inspections
 - 3. Scope of Inspection
 - 4. Entrance/Exit Interviews
 - 5. Conduct of Inspection, Accumulation of Data
 - 6. Post-inspection Activities of Inspectors
MC 0610 Inspection Reports
MC 0620 Inspection Documents and Records
MC 1100 Notification of Significant Meetings
 - 7. Morning Reports
MC 0230 Morning Report
 - 8. Non-routine Licensee Events
MC 1110 Potential Abnormal Occurrences
IP 90714 Non-routine Reporting Program
Management Directive 8.3 NRC Incident Investigation Program
Management Directive 8.9 Accident Investigation
 - 9. Preliminary Notification
MC 1120 Preliminary Notifications
 - 10. Bulletins/Information Notices
MC 0720 NRC Bulletins and Information Notices
 - 11. Use of Consultants of NRC
MC 1360 Use of Physician and Scientific Consultants in the Medical Consultant Program
Management Directive 10.6 Use of Consultants & Experts

12. Allegations and Investigations

Management Directive 8.8 Management of Allegations

13. Communication outside NRC

Management Directive 5.5 Public Affairs Program

Management Directive 3.6 Distribution of Unclassified NRC
Staff/Contractor-Generated Reports

Qualification Guide 8
NRC Management Directives

- A. The First Line Supervisor should select some currently applicable NRC Management Directive (MD) references. These references should include those listed below and be documented. The qualifying inspector should be expected to have a general knowledge of the topics addressed in the references. He/she may learn the information by studying, study-quizzes, briefings, or discussions. The selection should include:
1. NRC MD 9.1 Organization Management
 2. NRC MD 9.29 Organization and Function of Regional Offices
 3. NUREG 0325 USNRC Functional Organization Chart
 4. NRC MD 3.2 Privacy Act
 5. NRC MD 3.1 Freedom of Information Act
 6. NRC MD 10.130 Safety and Health Program Under the Occupational Safety and Health Act
 7. NRC MD 10.131 Protection of NRC Employees Against Ionizing Radiation
 8. NRC MD 14.1 Official Temporary Duty Travel
 9. NRC MD 10.159 Differing Professional Views or Opinions
 10. NRC MD 10.42 Hours of Work and Premium Pay
 11. NRC MD 10.43 Time and Attendance Reporting
 12. NRC MD 10.67 Non-SES Performance Appraisal System
 13. NRC MD 10.101 Employee Grievances
 14. NRC MD 8.3 NRC Incident Investigation Program
 15. NRC MD 8.8 Management of Allegations
 16. NRC MD 5.1 Intergovernmental Consultation
 17. NRC MD 5.5 Public Affairs Program
 18. NRC MD 8.11 Review Process for 10 CFR 2.206 Petitions
 19. NRC MD 10.160 Open Door Policy
- B. The First Line Supervisor will discuss application of the selected NRC Management Directives to the HLW Inspectors program with the qualifying individual to test his/her knowledge.

Qualification Guide 9
Formal Training

The standards for each Training Course are provided in the NRC Technical Training Course Catalog and will not be duplicated in the Qualification Guide.