

IMC 1248, Appendix E

**Training Requirements and Qualification Journal for Division of Waste Management
Inspector and License Reviewers**

APPENDIX E

TRAINING REQUIREMENTS FOR DIVISION OF WASTE MANAGEMENT INSPECTORS AND LICENSE REVIEWERS

A. APPLICABILITY

The training described below is required for all inspectors and license reviewers assigned to perform Division of Waste Management (DWM) inspections and license reviews.

B. TRAINING

1. Required Initial Training

a. Self Study and on the Job Training

- (1) NRC Orientation
- (2) Code of Federal Regulations
- (3) Office Instructions
- (4) Regulatory Guidance
- (5) NRC Inspection Manual
- (6) Industry Codes and Standards
- (7) Inspection Accompaniments
- (8) NRC Management Directives
- (9) Review of significant events involving either licensees or sites for which DWM has regulatory responsibility
- (10) Directed Review of Selected Licensing Case Work

b. Core Training These courses establish minimum formal classroom training requirements. Refer to Section 1248-11 for exceptions to these requirements.

- (1) Fundamentals of Inspection Course (G-101) or Inspection Procedures Course (G-108)
- (2) Root Cause/Incident Investigation Workshop (G-205)
- (3) Inspecting for Performance Course - Materials Version (G-304)
- (4) Effective Communications for NRC Inspectors

- (5) OSHA Indoctrination Course (G-111)
- (6) Site Access Training (H-100)
- (7) Introduction to Health Physics Course (H-117) or Health Physics Technology Course (H-201)
- (8) Licensing Practices and Procedures Course (G-109)
- (9) NRC Inspection Team Leader Workshop
- (10) The Regulatory Process Course
- (11) Confident Public Speaking

- c. Specialized Training Depending on the employee's previous work experience and planned activities, additional courses may be required in order to gain knowledge necessary for specialized inspection or licensing activities. Management will make this determination on an individual basis.

High Level Waste (HLW):

- (1) Leading NRC Work Teams
- (2) Lead Auditor Training
- (3) General Underground Training (GUT), including First Aid and CPR
- (4) General Employee Radiological Training (GERT)
- (5) General Employee Training (GET)

NOTE: GUT, GERT, and GET Training are presently provided to NRC employees by DOE at the Yucca Mountain Site under mutual agreement between NRC and DOE. They are required for site visits.

2. Supplemental Training Additional training beyond that identified as Core Training. This training will be determined by the supervisor and will depend on the individual's previous work experience and planned inspection or licensing activities in specific areas.
3. Refresher Training Refresher training will be conducted every three years following initial certification. Refresher training will include the following courses and other courses as determined by management:
 - (1) Fundamentals of inspection Refresher Course (G-102)

END

DIVISION OF WASTE MANAGEMENT INSPECTOR AND LICENSE REVIEWER
NRC INSPECTOR AND LICENSE REVIEWER QUALIFICATION JOURNAL

Applicability

This NRC Inspector and License Reviewer Qualification Journal implements NRC Manual Chapter 1248, which establishes the minimum training requirements for Division of Waste Management personnel assigned to perform safety inspections or license reviews for waste management activities.

The NRC Inspector and License Reviewer Qualification Journal serves as a guideline for the development of a Divisional Qualification Journal and establishes the minimum training requirements consistent with NRC Manual Chapter 1248. The Division Qualification Journal must provide traceable documentation to show that minimum requirements are met for each inspector.

The NRC Inspector and License Reviewer 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 which 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 identify references with general application to the inspector's qualification. The inspector and license reviewer is expected to have a general familiarity with these references. Other sections of the qualification guides identify specific references that have direct application to an inspection or licensing discipline. The inspector and license reviewer is expected to demonstrate detailed knowledge of the inspection or licensing discipline specific references.

In order to support the review of upper tier documents, programs, and policies, the inspector's First Line Supervisor will assign one or more specific non-power reactor facilities and/or disposal sites as reference facilities. 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 the NRC. The use of specific real world material will reinforce the qualification process.

11. Formal Training

First Line Supervisor

Qualification Board
Requirement Met

Second Level Supervisor
or Board Chairman

Recommendation as a qualified
Inspector

Second Level Supervisor

Certification Memo Issued

Second Level Supervisor

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 and NMSS organization	_____ Employee	_____
2.	Discussion of NRC 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 office policies and procedures	_____	_____
	Employee	
B. Discussion completed on 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/ Bulletins	_____	_____
	Employee	
3. NUREGs	_____	_____
	Employee	
4. Generic Letters	_____	_____
	Employee	
5. Federal Register Notices	_____	_____
	Employee	
6. Policy and Guidance Directives	_____	_____
	Employee	
7. NRC Branch Technical Position	_____	_____
	Employee	
8. SECY Papers	_____	_____
	Employee	
B. Discussion of regulatory guidance with application to the Division of Waste Management Inspector program	_____	_____
	First Line Supervisor	

Qualification Card 5
NRC Inspection Manual Chapters (MC)

	<u>Initials</u>	<u>Date</u>
A. Review of appropriate NRC MCs completed	_____ Employee	_____
B. Discussion of NRC MCs and their relation to the Division of Waste Management Inspectors program	_____ First Line Supervisor	_____

Qualification Card 6
Industry Codes and Standards

	<u>Initials</u>	<u>Date</u>
A. Review of selected codes and standards completed	_____ Employee	_____
B. Discussion of the application of codes and standards to the Division of Waste Management Inspectors program	_____ First Line Supervisor	_____

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.	Discussion of inspection and employee's role		
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

	<u>Initials</u>	<u>Date</u>
A. Review of selected portions of the NRC Management Directives completed	_____	_____
	Employee	
B. Discussion of the application of the NRC Management Directives to the Division of Waste Management Inspectors program	_____	_____
	First Line Supervisor	

Qualification Card 9
Review of Significant Events

	<u>Initials</u>	<u>Date</u>
A. Review of selected significant historical events involving either licensees or sites for which the Division of Waste Management has regulatory responsibility	_____	_____
	— Employee	
B. Discussion of the importance of these events and lessons learned	_____	_____
	First Line Supervisor	

Qualification Card 10
Directed Review of Selected Licensing Casework

	<u>Initials</u>	<u>Date</u>
A. Review of selected licensing casework	_____	_____
	Employee	
B. Discussion of the importance of these licensing caseworks	_____	_____
	First Line Supervisor	

Qualification Card 11
Formal Training

A.	CORE TRAINING:	<u>Initials</u>	<u>Date</u>
1.	Fundamentals of Inspection Course (G-101) or Inspection Procedures Course (G-108)	_____	_____
		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	_____	_____
		Training Coordinator	
5.	OSHA Indoctrination Course (G-111)	_____	_____
		Training Coordinator	
6.	Site Access Training (H-100)	_____	_____
		Training Coordinator	
7.	Introduction to Health Physics Course (H-117) or Health Physics Technology Course (H-201)	_____	_____
		Training Coordinator	
8.	Licensing Practices and Procedures Course (G-109)	_____	_____
		Training Coordinator	
9.	NRC Inspection Team Leader Workshop	_____	_____
		Training Coordinator	
10.	The Regulatory Process	_____	_____
		Training Coordinator	
11.	Confident Public Speaking	_____	_____
		Training Coordinator	

B. SPECIALIZED TRAINING

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

<u>Course Title</u>	<u>Course or Training</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 the 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 which 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
2. The First Line Supervisor should discuss NRC organization and role with the qualifying individual to ensure the qualifying individual has a full understanding of NRC's organization and mission and the role of the inspector in that mission.

Qualification Guide 2
Code of Federal Regulations (CFR)

A. A selection of currently applicable CFR Parts should be made by the First Line Supervisor. 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
5. 10 CFR Part 20 Standards for protection against radiation (includes selected Questions and Answers, Q & 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 60 Disposal of high level radioactive wastes in geologic repositories
12. 10 CFR Part 61 Licensing requirements for land disposal of radioactive waste
13. 10 CFR Part 62 Criteria and procedures for emergency access to non-federal and regional low level waste disposal facilities
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 150 Exemptions and continued regulatory authority in agreement states and in offshore waters under section 274
18. 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
19. 10 CFR Part 171 Annual fees for reactor operating licenses, and fuel cycle licenses and materials licenses, including holders of certificates of compliance, registrations and quality assurance program approvals and government agencies licensed by the NRC
20. 40 CFR Part 141 National Primary Drinking Water Regulations

B. Following completion of the qualifying individual's self study of the listed 10 CFR Parts, a discussion will be held with the qualifying inspector by the First Line Supervisor to test the qualifying individual's knowledge of these Parts. To the extent possible, recent application of various sections, new regulatory initiatives, and current industry issues should be emphasized.

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
 - 1-19 Notification of Regional Administrators
 - 1-22 Quality Assurance
 - 1-23 Open Meetings
 - 1-24 Office of Investigation and the release of information on investigations/inspections
 - 1-27 Management of Allegations
 - 1-30 Ensuring the availability, security, and integrity of official docket files for material licenses
 - 1-33 Responding to the Commission/OGC for Technical Assistance
 - 1-40 Legislative and Regulatory Review Requirements for the Office of the Inspector General
 - 1-46 Preparing Federal Register Notices for Site Decommissioning Management Plan Licensing Actions
 - 1-48 Preparing Environmental Assessments
 - 1-50 Environmental Justice in NEPA Documents

2. The qualifying individual should review the NMSS policies and practices on:
 - a. Travel, including Management Directive 14.1 Official Temporary Duty Travel

 - 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)
 - (1) 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 has a full and complete understanding.

Qualification Guide 4
Regulatory Guidance

A. A selection of currently applicable regulatory guidance should be identified by the First Line Supervisor. 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 addressed in the references. The review may be accomplished 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. Study of corresponding and subtier codes and standards is recommended.

1. Regulatory Guides (use latest revision)

3.50	Standard Format and Content for a License Application to Store Spent Fuel and High-Level Radioactive Waste
3.65	Standard Format and Content of Decommissioning Plans for Licensees Under 10 CFR Parts 30, 40, and 70
3.66	Standard Format and Content of Financial Assurance Mechanisms Required for Decommissioning Under 10 CFR Parts 30, 40, 70, and 72
4.17	Standard Format and Content of Site Characterization Plans for High-Level Waste Geologic Repositories (1987)
4.19	Guidance for Selecting Sites for Near Surface Disposal of Low Level Radioactive Waste
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 80-024	Low-Level Radioactive Waste Burial Criteria
IN 83-005	Obtaining Approval for Disposing of Very-Low-Level Radioactive Waste - 10 CFR Section 20.302
IN 84-072	Clarification of Conditions For Waste Shipments Subject To Hydrogen Gas Generation

IN 85-092	Surveys of Wastes Before Disposal From Nuclear Reactor Facilities
IN 86-020	Low-Level Radioactive Waste Scaling Factors, 10 CFR Part 61
IN 86-090	Requests to Dispose of Very Low-Level Radioactive Waste Pursuant to 10 CFR 20.302
IN 87-003	Segregation of Hazardous and Low-Level Radioactive Wastes
IN 88-008	Chemical Reactions with Radioactive Waste Solidification Agents
IN 88-016	Identifying Waste Generators in Shipments of Low-Level Waste to Land Disposal Facilities
IN 89-013	Alternate Waste Management Procedures in Case of Denial of Access to Low-Level Waste Disposal Sites
IN 89-027	Limitations on the Use of Waste Forms and High Integrity Containers for the Disposal of Low-Level Radioactive Waste
IN 89-085	EPA's Interim Final Rule on Medical Waste Tracking and Management
IN 90-009	Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees
IN 90-020	Personnel Injuries Resulting From Improper Operation of Radwaste Incinerators
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 90-075	Denial of Access to Current Low-Level Radioactive Waste Disposal Facilities
IN 91-003	Management of Wastes Contaminated With Radioactive Materials ("Red Bag" Waste and Ordinary Trash)
IN 91-065	Emergency Access to Low-Level Radioactive Waste Disposal Facilities

IN 94-023	Guidance to hazardous, Radioactive and Mixed Waste Generators on the Elements of a Waste Minimization Program
BL 75-007	No Title - Involves Exothermic Reaction in Radwaste Shipment
BL 79-019	Packaging of Low-Level Radioactive Waste for Transport and Burial
BL 79-020	Packaging, Transport and Burial of Low-Level Radioactive Waste

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 1323	License Application Review Plan (September 1994)
NUREG 1330	Manual for the Review of Financial Assurance Mechanisms for Decommissioning Under 10 CFR 30, 40, 70, and 72
NUREG 1444	Site Decommissioning Management Plan
NUREG 1495	Overall Review Strategy for the Nuclear Regulatory Commission's High-Level Waste Repository Program (November 1994)
NUREG 1556 Vol. 15	Consolidated Guidance About Materials Licenses Program-Specific Guidance About About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses
NUREG 1573	Branch Technical Position on a Performance Assessment Methodology for Low-Level Radioactive Waste Disposal Facilities
NUREG 1600	General Statement of Policy and Procedures for NRC Enforcement Actions
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-4510 Assessing Compliance with the EPA HLW October 1986 Standard: An Overview
- 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)
- NUREG/CR-5849 Manual for Conducting Radiological Surveys in Support of License Termination
- NUREG/CR-6232 Assessing the Environmental Availability of Uranium in Soils and Sediments

Others as selected by the First Line Supervisor

4. Generic Letters(GL)

- GL 80-009 Low Level Radioactive Waste Disposal
- GL 80-051 On-Site Storage Of Low-Level Waste
- GL 81-038 Storage of Low Level Radioactive Wastes at Power Reactor Sites
- GL 83-007 The Nuclear Waste Policy Act of 1982
- GL 85-014 Commercial Storage At Power Reactor Sites Of Low Level Radioactive Waste Not Generated By The Utility

Others as selected by the First Line Supervisor.

5. Federal Register Notices

As selected by the First Line Supervisor.

6. Policy and Guidance Directives (PGD)

- PGD 8-01 Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Byproduct, Source, and Special Nuclear Material Licensees, November 1983
- PGD 8-05 Standard Review Plan for Evaluating Compliance with Decommissioning Requirements for Source, Byproduct, and Special Nuclear Material Applications, April 1991
- PGD 8-10 Standard review Plan: Evaluating Decommissioning Plans for Licensees Under 10 CFR Parts 30, 40, and 70
- 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.
- 77-01 Design, Construction, and Inspection of Embankment Retention Systems for Uranium Mills, Reg. Guide 3.11, Rev.2, December 1997.
- 77-02 Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable, Rev. 1-R, Reg. Guide 8.10, May 1977.
- 78-01 Preoperational Radiological Environmental Monitoring Programs for Uranium Mills, Fuel Proc. and Fab. Br., January 1978.
- 78-02 Branch Position for the Contents of Applications for Uranium Ore-buying Station Licenses, Fuel Proc. and Fab. Br., February 1978.
- 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.

- 79-01 Explorations for Design and Evaluation of Uranium Mill Tailings Retention Systems, January 1979.

- 79-02 Quality Assurance for Radiological Monitoring Programs (Normal Operations)-Effluent Streams and the Environment, Rev. 1, Reg. Guide 4.15, February 1979.

- 80-01 Operational Inspection and Surveillance of Embankment Retention Systems for Uranium Mill Tailings, Rev. 1, Reg. Guide 3.11.1, October 1980.

- 80-02 Radiological Effluent and Environmental Monitoring at Uranium Mills, Rev. 1, Reg. Guide 4.14, April 1980.

- 80-03 Air Sampling in the Workplace, Reg. Guide 8.25, June 1992. Superseded by 92-05.

- 81-01 Design, Installation, and Operation of Natural and Synthetic Liners at Uranium Recovery Facilities, Uran. Rec. Lic. Br., July 1981.

- 81-02 Groundwater Monitoring at Uranium In-Situ Solution Mines, Uran. Rec. Lic. Br., December 1981.

- 81-03 Standard Format and Content of License Applications for Uranium Mills, Proposed Rev 2, Reg. Guide 3.5, August 1981.

- 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.

- 82-01 Hydrogeologic Characterization of Uranium Solution Mine and Mill Tailings Disposal Sites, R1, Uran. Rec. Lic. Br., May 1982.

- 82-02 Preparation of Environmental Reports for Uranium Mills, Rev. 2, Reg. Guide 3.8, October 1982.

- 82-03 Standard Format and Content of License Applications, Including Environmental Reports, for In-Situ Uranium Solution Mining, Reg Guide 3.46, June 1982.

- 82-04 Calculational models for Estimating Radiation Doses to Man from Airborne Radioactive Materials Resulting from Uranium Milling Operations, Reg. Guide 3.51, March 1982. Errata August 1982.

- 82-05 Design, Installation, and Inspection of Seepage Control Liners at Uranium Recovery Facilities, Draft Reg. Guide MS-146-4, November 1982.
- 82-06 Delegation and Assignment of Certain Licensing Functions Associated With Uranium Recovery Operations, Memorandum from J.G. Davis to William J. Dircks, November 1982.
- 83-01 Hydrogeologic Design Criteria for Tailings Retention Systems, January 1983.
- 83-02 Standard Review Plans Providing Guidance for Uranium Recovery Facility Licensing, July 1983.
- 83-03 Guidelines for Modeling Groundwater Transport of Radioactive and Non-Radioactive Contaminants at Tailings Disposal Sites, Draft Reg. Guide ES-115-4, May 1983.
- 83-04 Health Physics Surveys in Uranium Mills, Reg. Guide 8.30, June 1983.
- 83-05 Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills Will Be As Low As Reasonably Achievable, Reg. Guide 8.31, May 1983.
- 84-01 Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials, URFO, Rev. September 1984.
- 85-01 Standard Review Plan for UMTRCA Title I Mill Tailings Remedial Action Plans, October 1985. Superseded by 92-09
- 86-01 Inspections of Remedial Action at Inactive Uranium Mill Tailings Sites, (Title I UMTRCA), Chapter 2620, Inspection and Enforcement Manual, March 1986. Superseded by 93-01.
- 86-02 General Guidance for Designing, Testing, Operating and Maintaining Emission Control Devices at Uranium Mills, Reg. Guide 3.56, May 1986.
- 86-03 Establishing Quality Assurance Programs for Packaging Used in the Transport of Radioactive Material, Rev. 1, Reg. Guide 7.10, June 1986.
- 87-01 Regulation of Ground-Water Contaminants and In-Situ Uranium Solution Mining, Memorandum M.R. Knapp to R.D. Smith, May 1987.

- 87-02 Methods for Estimating Radioactive and Toxic Airborne Source Terms for Uranium Milling Operations, Reg. Guide 3.59, March 1987.

- 87-03 Instruction Concerning Prenatal Radiation Exposure, Rev. 3, Reg. Guide 8.13, June 1999.

- 88-01 Information Needs to Demonstrate Compliance with EPA's Proposed Groundwater Protection Standards in 40 CFR Part 192, Subparts A-C, LLWM/LLTB, June 1988. Superseded by 89-03.

- 88-02 Alternate Concentration Limits for Uranium Mills-Standard Format and Content Guide and Standard Review Plan for Alternate Concentration Limit Applications, LLWM/LLtb, June 1988. Superseded by 94-01.

- 88-03 Management Position on Uranium Mill Tailings Reclamation, LLWM/LLOB, November 1988. Superseded by 89-01.

- 88-04 Financial Assurances for Reclamation, Decommissioning, and Long-Term Surveillance and Control of Uranium Recovery Facilities, LLWM, October 1988.

- 88-05 Onsite Meteorological Measurement Program for Uranium Recovery Facilities-Data Acquisition and Reporting, Reg. Guide 3.63, March 1988.

- 88-06 Guidance for Selecting Sites for Near Surface Disposal of Low-Level Radioactive Waste, Reg. Guide 4.19, August 1988.

- 88-07 Bioassay at Uranium Mills, Rev. 1 Reg. Guide 8.22, August 1988.

- 88-08 Use of Title I Supplemental Standards for Title II Sites, Memorandum from H.L. Thompson, Jr. to R.D. Martin, June 27, 1988.

- 89-01 Uranium Mill Tailings Management Position, Rev., LLWM/RSS (IV), January 1989.

- 89-02 Testing and Inspection Plans During Construction of DOE's Remedial Action at Inactive Uranium Mill Tailings Sites, R 2, LLWM, January 1989.

- 89-03 Standard Format and Content for Documentation of Remedial Action Selection at Title I Uranium Mill Tailings Sites, LLWM, February 1989.

- 89-04 Processing Material License Applications Involving Change of Ownership, IMNS, R1, June 1989. (See NUREG 1556 Vol. 15)
- 89-05 Calculation of Radon Flux Attenuation by Earthen Mill Tailings Covers, Reg. Guide 3.64, June 1989.
- 89-06 Standard Format and Content of Decommissioning Plans for Licensees under 10 CFR Parts 30, 40, and 70, Reg. Guide 3.65, August 1989.
- 89-07 Records Important for Decommissioning for Licensees Under 10 CFR Parts 30, 40, 70, and 72, Draft Reg. Guide, Task DG-3001, July 1989.
- 90-01 Design of Erosion Protection Covers for Stabilization of Uranium Mill Tailings Disposal Sites, LLWM, August 1990.
- 90-02 Inspection Report Guidance, URFO, May 1990.
- 90-03 Memorandum of Understanding Between the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission, November 1990.
- 91-01 Costs for Fencing Reclaimed Title II Sites, Letter from R.L. Bangart to A.B. Beach, February 1991.
- 91-02 Standard Format for Completion Review Report (CRR)," LLUR, June 1991.
- 91-03 Position on Disposal Of In-Situ Wastes, LLWM, September 1991.
- 91-04 Implementation of 10 CFR Part 40, Appendix A, Criterion 1, as Affected by the Atomic Safety and Licensing Appeals Board Decision on Kerr-McGee's West Chicago Facility, Letter from J.S. Surmeier to R.E. Hall, October 1991.
- 91-05 Request for Designation of an Historic Preservation Officer, Memorandum from R.L. Bangart to L.J. Callan, November 1991.
- 91-06 Guidelines for NRC Staff Groundwater Protection Evaluation of DOE's UMTRCA Title I Remedial Action Plans, LLWM, June 1991. Superseded by 92-09.
- 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.
- 91-11 Delegation of Authority, Memorandum from R.L. Bangart to J.J. Surmeier, April 3, 1991.
- 92-01 Standardized In-Situ Facility License Conditions, Memorandum from L.J. Callan to R.L. Bangart, July 1992.
- 92-02 Assessments and Audits: Low Level Waste Management (LLWM) Participation in Agreement State Reviews, LLWM, February 1992.
- 92-03 Interim Guidance on Evaluation Procedure for Hydraulic Conductivity of Radon/Infiltration Barriers for Title I and Title II Mill Tailings Sites, Memorandum from J.J. Surmeier to R.E. Hall, April 9, 1992.
- 92-04 Guiding Principals 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.
- 92-09 Standard Review Plan for UMTRCA Title I Mill Tailings Remedial Action Plans, Revision 1, LLWM, October, 1992. Superseded by 93-02.
- 92-10 ALARA Levels For Effluents From Materials Facilities, Reg. Guide 8.37, July 1993.
- 93-01 On-Site Construction Reviews of Remedial Action At Inactive Uranium Mill Tailings Sites, MC 2620, February 1993.
- 93-02 Standard Review Plan for the Review of Remedial Action of Inactive Mill Tailings Sites Under Title I of the Uranium Mill Tailings Radiation Control Act, Rev. 1, June 1993.
- 94-01 Alternate Concentration Limits for Title II Uranium Mills, Draft Final Staff Technical Position, February 1994.

95-01 Effluent Disposal at Licensed Uranium Recovery Facilities, Staff
Technical Position, April 1995.

High-Level Waste Review Plans:

Administrative Plan and Procedures for NRC Staff Review of DOE's Site
Characterization Plan (December 1988)

Revised Technical Review Plan for NRC Staff Review of DOE's Site
Characterization Plans (December 1988)

Supplement to the Site Characterization Plan Review Plan (February 1989)

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

SP 60-002 Performance Objectives Relating to Isolation of the Waste
(August 1990)

SP 60-003 Definition of the Term Performance Objectives as Used in 10 CFR
60.133(i) (August 1990)

Disposal or Onsite Storage of Thorium and Uranium Wastes from
Past Operations

Others 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)

90-316 Decommissioning Records Plan, Records Management Guidelines
(RMG)

92-01 Decommissioning Records

- 92-106 Action Plan to Ensure Timely Remediation of Sites Listed in the Site Decommissioning Management Plan
- 93-013 Analysis of Energy Policy Act of 1992 Issues Related to High-Level Waste Disposal Standards (January 25, 1993)
- 94-145 Increase of Tritium and Iron-55 Unrestricted Use Limits for Surface Contamination at Shoreham and Fort St. Vrain

Others as selected by the First Line Supervisor.

Qualification Guide 5
NRC Inspection Manual Chapters (MC)

- A. A selection of currently applicable NRC MC and Inspection Procedure (IP) references with direct application to the Division of Waste Management Inspectors program should be identified by the First Line Supervisor. The application of the specific references to the inspection and licensing program should be studied in detail by the qualifying individual.

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 1248	Qualification Programs For Federal and State Materials and Environmental Management Programs 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

¹ Required for non-sealed source licensees.

MC 1360 Use of Physician and Scientific Consultants in the Medical Consultant Program

IP 87103 Inspection Material Licensees Involved in an Incident or Bankruptcy Filing

5. WASTE MANAGEMENT

MC 2401 Near-Surface Low-Level Radioactive Waste Disposal Facility Inspection Program

MC 8400 Radioactive Waste Management

MC 6500 Low-Level Radioactive Waste Storage Facilities

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

IP 84900 Low-Level Radioactive Waste Storage

6. RADIATION PROTECTION

MC 8300 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 3000 Management Meetings

MC 3500 Quality Assurance

MC 3700 Design, Design Changes, Modifications

MC 2900 Performance Appraisal Program

- B. The First Line Supervisor will hold discussions, interviews, or oral quizzes to test the qualifying individual's knowledge and understanding of the application of the selected references to the Division of Waste Management Inspectors program.

Qualification Guide 6
Industry Codes and Standards

- A. A selection of currently applicable industry codes and standards should be identified by the First Line Supervisor. 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. Standards selected should be documented by the First Line Supervisor

- B. The First Line Supervisor should test the qualifying individual's knowledge of application of these codes and standards to the Division of Waste Management Inspectors program by discussions, interviews, or oral quizzes.

Qualification Guide 7
Inspection Accompaniments

- A. Each qualifying individual should accompany certified inspectors on at least four inspections. At least two of these inspections should be performed at a facility other than the designated lead facility.

- 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, following 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
Management Directive 8.3 NRC Incident Investigation Program
Management Directive 8.10 NRC Medical Event Assessment 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. A selection of currently applicable NRC Management Directive (MD) references should be identified by the First Line Supervisor. These references should include those 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. 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 Procedures
 15. NRC MD 8.8 Management of Allegations
 16. NRC MD 4.6 License Fee Management Program
 17. NRC MD 5.1 Intergovernmental Consultation
 18. NRC MD 5.2 Memorandum of Understanding With States
 19. NRC MD 5.5 Public Affairs Program

20. NRC MD 8.11 Review Process for 10 CFR 2.206 Petitions

21. NRC MD 10.160 Open Door Policy

B. Application of the selected NRC Management Directives to the Division of Waste Management Inspectors program will be discussed with the qualifying individual by the First Line Supervisor to test the qualifying individual's knowledge.

Qualification Guide 9
Review of significant events involving either licensees or sites
for which the Division of Waste Management has regulatory responsibility

- A. A selection of significant historical related events should be identified by the First Line Supervisor. These events should be documented and studied in detail by the qualifying individual.
- B. The First Line Supervisor should discuss the selected events in detail with the qualifying individual and go over recommendations made, lessons learned, and changes identified to prevent recurrence. The relevance of the event to the Division of Waste Management Inspectors program should be stressed.

Qualification Guide 10
Directed Review of selected licensing casework

- A. A selection of licensing casework should be identified by the First Line Supervisor. These events should be documented and studied in detail by the qualifying individual.
- B. The First Line Supervisor should discuss the licensing casework in detail with the qualifying individual. The relevance of the casework to the Division of Waste Management Inspectors program should be stressed.

Qualification Guide 11
Formal Training

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

Attachment 1
Revision History for IMC 1248, Appendix E

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution Accession Number
N/A	ML1123511171 0/26/11 CN 11-022	Revision history sheet added. Combined Appendix A8 with Appendix B8 and renamed as IMC 1246 Appendix E3. Added "Training Requirements" Section from Appendix A8.	N/A	ML1123511281
N/A	ML12240A158 04/19/13 CN 13-011	IMC 1248 Appendix E was created to replace IMC 1246 Appendix E3 and remove FSME activities from the NMSS qualification journal IMC 1246. The qualification was originally published on January 5, 2001. No changes were made to the training requirements or qualification journal since they were published on January 5, 2001.	N/A	N/A