SECTION I

MATERIALS LICENSE REVIEWER
NRC LICENSE REVIEWER QUALIFICATION JOURNAL

Applicability

This NRC License Reviewer Qualification Journal implements NRC Manual Chapter 1246, Appendix A, Section I, by establishing the minimum training requirements for personnel assigned to perform license reviews for materials facilities.

The NRC License Reviewer Qualification Journal serves as a guideline for the development of a Qualification Journal, and establishes the minimum training requirements consistent with NRC Manual Chapter 1246. The Qualification Journal must provide traceable documentation to show that minimum requirements are met for each license reviewer.

The NRC 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. The corresponding qualification guide 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 license reviewer's qualification. The 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 the license review discipline. The license reviewer is expected to demonstrate detailed knowledge of the license review specific references.

In order to support the review of upper tier documents, programs, and policies, the license reviewer's immediate supervisor will assign one or more specific materials licensees as reference licensees. The selection of reference licensees is intended to provide the license reviewer's management with the ability to tailor the qualification process to the experience and training level of the license reviewer, and to meet the needs of the NRC. The use of specific real world material will reinforce the qualification process.

LICENSE REVIEWER QUALIFICATION JOURNAL - Materials License Reviewer

_____ _____ _____ _____ _____

(Name) (Title) (Branch) (Section)

To complete your qualification as a Materials License Reviewer you are to complete the following signature cards. All signoffs 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 License Reviewer Qualification Journal.

	Signature When Complete	Date
1. NRC Orientation	_____ First Line Supervisor	_____
2. Code of Federal Regulations	_____ First Line Supervisor	
3. Office Instructions/Regional Procedures	_____ First Line Supervisor	
4. Regulatory Guidance	_____ First Line Supervisor	_____
5. NRC Inspection Manual Chapter (MC)	_____ First Line Supervisor	
6. Industry Codes and Standards	_____ First Line Supervisor	
7. Required Licensing Site Visits to Core Licensees	_____ First Line Supervisor	
8. NRC Management Directives	_____ First Line Supervisor	
9. Review of Significant Events at Materials Licensees	_____ First Line Supervisor	_____
10. Directed Review of Selected Licensing Case Work	_____ First Line Supervisor	_____
11. Formal Training	_____ First Line Supervisor	

Qualification Board Requirement Met _____
Second Level Supervisor or Board Chairman

Recommended as a qualified license reviewer _____
Second Level Supervisor

Certification Memo Issued _____
Second Level Supervisor

Qualification Card 1
NRC Orientation

A. Site Orientation	Initials	Date
1. New employee processing package completed	_____ Employee	_____
2. Facility tour and introduction	_____ First Line Supervisor	_____

B. NRC Organization		
1. Review of NRC headquarters and regional organization	_____ Employee	_____
2. Discussion of NRC organization	_____ First Line Supervisor	_____

Qualification Card 2
Code of Federal Regulations (CFR)

	Initials	Date
A. Familiarization with selected CFR parts completed	_____ Employee	_____
B. Discussion completed on CFR parts related to the materials license review program	_____ First Line Supervisor	

Qualification Card 3
Office Instructions/Regional Procedures

	Initials	Date
A. Familiarization with office/ regional policies and procedures	_____ Employee	
B. Discussion completed on office/ regional policies and procedures	_____ First Line Supervisor	

Qualification Card 4
Regulatory Guidance

	Initials	Date
A. Review of regulatory guidance		
1. Regulatory Guides	_____ Employee	_____
2. Information Notices /Bulletins	_____ Employee	_____
3. NUREGs	_____ Employee	_____
4. Generic Letters	_____ Employee	_____
5. Federal Register Notices	_____ Employee	_____
6. NRC Branch Technical Positions	_____ Employee	_____
7. Policy and Guidance Directives	_____ Employee	_____
8. Standard Deficiency Paragraphs	_____ Employee	_____
9. Standard License Conditions	_____ Employee	_____
10. Licensing Checklists	_____ Employee	_____
11. Standard Review Plans	_____ Employee	_____
12. Sealed Source and Device Registry	_____ Employee	_____
13. Technical Assistance Requests	_____ Employee	_____

B. Discussion of regulatory guidance with application to the materials license review program _____ _____
First Line Supervisor

Qualification Card 5
NRC Inspection Manual Chapters (MC)

	Initials	Date
A. Review of appropriate portions of NRC MCs completed	_____ Employee	_____
B. Discussion of NRC MCs and its relation to the materials license review program	_____ First Line Supervisor	_____

Qualification Card 6
Industry Codes and Standards

	Initials	Date
A. Review of selected codes and standards completed	_____ Employee	_____
B. Discussion of the application of codes and standards in the materials license review program	_____ First Line Supervisor	_____

Qualification Card 7
Required (As Appropriate) Licensing Site Visits
to Core Licensees

	Initials	Date
A. Site visits completed		
1. _____ Facility	_____ Employee	_____
2. _____ Facility	_____ Employee	_____
3. _____ Facility	_____ Employee	_____
4. _____ Facility	_____ Employee	_____

B. Review and discussion by first line supervisor of licensing site visits and their relation to the materials license review 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 materials license review program	_____ First Line Supervisor	_____

Qualification Card 9
Review of Significant Events at Materials Licensees

	Initials	Date
A. Review of selected significant historical materials events	_____ Employee	_____
B. Discussion of the importance of these events and lessons learned	_____ First Line Supervisor	

Qualification Card 10
Directed Review of Selected Licensing Case Work

	Initials	Date
A. Review of selected licensing casework		
1. _____ (Case Study)	_____ Employee	_____
2. _____ (Case Study)	_____ Employee	_____
3. _____ (Case Study)	_____ Employee	_____
4. _____ (Case Study)	_____ Employee	_____
B. Discussion by first line supervisor of directed review of the selected casework and its relation to the materials license review program.		
1. _____ (Case Study)	_____ First Line Supervisor	_____
2. _____ (Case Study)	_____ First Line Supervisor	_____
3. _____ (Case Study)	_____ First Line Supervisor	_____
4. _____ (Case Study)	_____ First Line Supervisor	_____

Qualification Card 11
Formal Training

A. CORE TRAINING:	Initials	Date
1. Health Physics Technology Course (H-201)	_____ Training Coordinator	_____
2. Diagnostic and Therapeutic Nuclear Medicine Course (H-304)	_____ Training Coordinator	_____
3. Safety Aspects of Industrial Radiography Course (H-305)	_____ Training Coordinator	_____
4. Teletherapy and Brachytherapy Course (H-313)	_____ Training Coordinator	_____
5. Licensing Practices and Procedures Course (G-109)	_____ Training Coordinator	_____
6. Transportation of Radioactive Materials Course (H-308)	_____ Training Coordinator	_____
7. NMSS Radiation Worker Training Course (H-102)	_____ Training Coordinator	_____

| B. SPECIALIZED TRAINING:

Other specialized training courses required for license reviewers performing licensing activities in specific areas:

Course Title	Course #	Initials Supervisor	Initials Training Coordinator	Date
_____	_____	_____	_____	_____
_____	_____	_____	_____	
_____	_____	_____	_____	
_____	_____	_____	_____	

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, classrooms, etc.

B. NRC Organization

1. The qualifying individual should review and become familiar with:

   a. Organizational charts of division, NMSS, regions 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 license reviewer in that mission.

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 31	General domestic licenses for byproduct material
9.	10 CFR Part 32	Specific domestic licenses to manufacture or transfer certain items containing byproduct material
10.	10 CFR Part 33	Specific domestic licenses of broad scope for byproduct material
11.	10 CFR Part 34	Licenses for radiography and radiation safety requirements for radiographic operations
12.	10 CFR Part 35	Medical use of byproduct material
13.	10 CFR Part 36	Licenses and radiation safety requirements for irradiators
14.	10 CFR Part 39	Licenses and radiation safety requirements for well logging
15.	10 CFR Part 40	Domestic licensing of source material
16.	10 CFR Part 61	Licensing requirements for land disposal of radioactive waste

17.	10 CFR Part 70	Domestic licensing of special nuclear material
18.	10 CFR Part 71	Packaging and transportation of radioactive material
19.	10 CFR Part 150	Exemptions and continued regulatory authority in agreement states and in offshore waters under section 274
20.	10 CFR Part 170	Fees for facilities, materials, import and export licenses and other regulatory services under the Atomic Energy Act of 1954, as amended
21.	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 NRC
22.	29 CFR Part 1910	Occupational Safety and Health Standards
23.	40 CFR Part 61	National Emission Standards for Hazardous Air Pollutants (emphasis on Subpart I)
24.	40 CFR Part 141	National Primary Drinking Water Regulations
25.	49 CFR Parts 171 through 180	Transportation
26.	40 CFR Part 190	Environmental Radiation Protection for Nuclear Power Operations (Uranium Fuel Cycle Standards)
27.	10 CFR Part 110	Export and Import of Nuclear Material and Equipment

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

A. Office/Region Policies and Procedures

1. Read the Region Policy and Procedures Manual

2. The qualifying individual should review the division/NRC 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 (ADAMS & NUDOCS) and Management Directive 13.1, Property Management

f. Union activities, including Management Directive 10.102, Lqabor-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. Division 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.

A. A selection of currently applicable regulatory guidance should be identified by the First Line Supervisor. These references should include those listed below (documents marked by an asterisk must be selected as a minimum) 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)

4.6 Measurements of Radionuclides in the Environment - Strontium-89 and Strontium-90 Analyses

4.13 Performance, Testing and Procedural Specifications for Thermoluminescence Dosimetry: Environmental Applications

4.15 Quality Assurance for Radiological Monitoring Programs

4.20 Constraint on Releases of Airborne Radioactive Materials to the Environment for Licensees other than Power Reactors.

*6.1 Leak Testing Radioactive Brachytherapy Sources

6.2 Integrity and Test Specifications

6.3 Design, Construction, and Use of Radioisotopic Power Generators for Certain Land and Sea Applications

6.4 Classifications of Containment Properties of Sealed Radioactive Sources

*6.5 General Safety Standard for Installations Using Nonmedical Sealed Gamma Ray Sources

6.6 Acceptance Sampling Procedures for Exempted and Generally Licensed Items Containing Byproduct Material

6.7 Preparation of an Environmental Report to Support a Rule Making Petition Seeking an Exemption for a Radionuclide-Containing Product

6.8 Identification Plaque for Irretrievable Well-Logging Sources

6.9 Establishing Quality Assurance Programs for the Manufacture and Distribution of Sealed Sources and Devices containing Byproduct Material

7.1 Administrative Guide for Packaging and Transporting Radioactive Material

*7.2 Packaging and Transportation of Radioactively Contaminated

Biological Materials

*7.3 Procedures for Picking Up and Receiving Packages of Radioactive Material

*7.4 Leakage Tests on Packages for Shipment of Radioactive Materials

7.5 Administrative Guide for Obtaining Exemptions from Certain NRC Requirements over Radioactive Material Shipments

*7.7 Administrative Guide for Verifying Compliance with Packaging Requirements for Shipments of Radioactive Materials

| 7.10 Establishing Quality Assurance Programs for Packaging Used in the Transport of Radioactive Material

*8.1 Radiation Symbol

*8.2 Guide for Administrative Practices in Radiation Monitoring

*8.4 Direct Reading and Indirect Reading Pocket Dosimeters

8.5 Criticality and Other Interior Evacuation Signals

*8.6 Standard Test Procedure for Geiger Muller Counters

| *8.7 Instructions for Recording and Reporting Occupational Radiation Exposure Data

*8.9 Acceptable Concepts, Models, Equations and Assumptions for a Bioassay Program

*8.10 Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable

8.11 Applications of Bioassay Uranium

*8.13 Instruction Concerning Prenatal Radiation Exposure

*8.14 Personnel Neutron Dosimeters

*8.15 Acceptable Programs for Respiratory Protection

*8.18 Information Relevant to Ensuring that Occupational Radiation Exposures at Medical Institutions Will be As Low As Reasonably Achievable

| *8.20 Applications of Bioassay for I-125 and I-131

*8.21 Health Physics Surveys for Byproduct Material at NRC Licensed Processing and Manufacturing Plants

8.22 Bioassay at Uranium Mills

*8.23 Radiation Safety Surveys at Medical Institutions

8.24 Health Physics Surveys During Enriched Uranium 235 Processing and Fuel Fabrication

*8.25 Air Sampling in the Workplace

8.26 Applications of Bioassay for Fission and Activation Products

*8.28 Audible Alarm Dosimeters

*8.29 Instruction Concerning Risks form Occupational Radiation Exposure

8.30 Health Physics Surveys in Uranium Mills

8.31 Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Mills Will Be As Low As Reasonably Achievable

*8.32 Criteria for Establishing a Tritium Bioassay Program

*8.33 Quality Management Program

*8.34 Monitoring Criteria and Methods to Calculate Occupational Radiation Doses

*8.35 Planned Special Exposures

*8.36 Radiation Doses to the Embryo/Fetus

*8.37 ALARA Levels For Effluents From Materials Facilities

*8.39 Release of Patients Administered Radioactive Materials

*10.4 Guide for the Preparation of Applications for Licenses to Process Source Material

10.12 Preparation of Petitions for Rulemaking Under 10 CFR 2.802 and Preparation and Submission of Proposals for Regulatory Guidance Documents

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

IN 91-002 Brachytherapy Source Management

IN 91-003 Management of Wastes Contaminated With Radioactive Materials ("Red Bag" Waste and Ordinary Trash)

IN 91-014 Recent Safety-Related Incidents at Large Irradiators

IN 91-023 Accidental Radiation Overexposures to Personnel Due to Industrial Radiography Accessory Equipment Malfunctions

IN 91-030 Inadequate Calibration of TLDs Utilized to Monitor Extremity Dose at Uranium Processing and Fabrication Facilities

IN 91-035 Labeling Requirements for Transporting Multi-Hazard

Radioactive Materials

IN 91-049 Enforcement of Safety Requirements for Radiographers

IN 91-060 False Alarms of Alarm Ratemeters Because of Radiofrequency Interference

IN 91-071 Training and Supervision of Individuals Supervised by an Authorized User

IN 92-010 Brachytherapy Incidents Involving Iridium-192 Wire Used in Endobronchial Treatments

IN 92-034 New Exposures Limits for Airborne Uranium and Thorium

IN 92-062 Emergency Response Information Requirements for Radioactive Material Shipments

IN 92-072 Employee Training and Shipper Registration Requirements for Transporting Radioactive Materials

IN 92-084 Release of Patients Treated With Temporary Implants

IN 93-004 Investigation and Reporting of Misadministrations by the Radiation Safety Officer

IN 93-005 Locking of Radiography Exposure Devices

IN 93-006 Potential Bypass Leakage Paths Around Filters Installed in Ventilation Systems

IN 93-007 Classification of Transportation Emergencies

IN 93-010 Dose Calibrator Quality Control

IN 93-014 Clarification of 10 CFR 40.22, Small Quantities of Source Material

IN 93-018 Portable Moisture-Density Gauge User Responsibilities During Field Operations

IN 93-030 NRC Requirements for Evaluation of Wipe Test Results; Calibration of Count Rate Survey Instruments

IN 93-031 Training of Nurses Responsible for the Care of Patients With Brachytherapy Implants

IN 93-036 Notifications, Reports, and Records of Misadministrations

IN 93-060 Reporting Fuel Cycle and Materials Events to the NRC Operations Center

IN 93-069 Radiographic Events At Operating Power Reactors

IN 93-100 Reporting Requirements for Bankruptcy

IN 94-007 Solubility Criteria For Liquid Effluent Releases to Sanitary Sewerage Under the Revised 10 CFR Part 20

IN 94-009 Release of Patients With Residual Radioactivity From Medical Treatment and Control Areas ... Revised 10 CFR Part 20

IN 94-015 Radiation Exposures During an Event Involving a Fixed Nuclear Gauge

IN 94-016 Recent Incidents Resulting in Offsite Contamination

IN 94-017 Strontium-90 Eye Applicators: Submission of Quality Management Plan (QMP), Calibration, and Use

IN 94-037 Misadministration Caused By a Bent Interstitial Needle During Brachytherapy Procedure

IN 94-039 Identified Problems in Gamma Stereotactic Radiosurgery

IN 94-047 Accuracy of Information Provided to NRC During the Licensing Process

IN 94-065 Potential Error in Manual Brachytherapy Dose Calculations Generated Using a Computerized Treatment Planning System

IN 94-070 Issues Associated with the Use of Strontium-89 and Other Beta Emitting Radiopharmaceuticals

IN 94-074 Facility Management Responsibilities for Purchased or Contracted Services for Radiation Therapy Programs

IN 94-081 Accuracy of Bioassay and Environmental Sampling Results

IN 95-007 Radiopharmaceutical Vial Breakage During Preparation

IN 95-025 Valve Failure During Patient Treatment with Gamma Stereotactic Radiosurgery Unit

IN 95-039 Brachytherapy Incidents Involving Treatment Planning Errors

IN 95-050 Safety Defect in Gammamed 12I Bronchial Catheter Clamping Adapters

IN 95-051 Recent Incidents Involving Potential Loss of Control of Licensed Material

IN 96-004 Incident Reporting Requirements for Radiography Licensees

IN 96-035 Failure of Safety Systems on Self-Shielded Irradiators Because of Inadequate Maintenance and Training

IN 96-047	Recordkeeping, Decommissioning Notifications for Disposals of Radioactive Waste by Land Burial Authorized under Former 10 CFR 20.304, 20.302, and Current 20.2002
IN 96-057	Incident-reporting Requirements Involving Intakes During a 24-hour Period That May Cause a Total Effective Dose Equivalent in Excess of 0.05 SV (5 rems)
IN 96-066	Recent Misadministrations Caused by Incorrect Calibrations of Strontium-90 Eye Applicators
IN 96-072	Undetected Failures That May Occur During Patient Treatments with Teletherapy Devices
IN 97-030	Control of Licensed Material During Reorganizations, Employee-Management Disagreements, and Financial Crises
IN 97-042	Management Weaknesses Resulting in Failure to Comply With Shipping Requirements for Special Nuclear Material
IN 97-043	License Condition Compliance
IN 97-055	Calculation of Surface Activity for Contaminated Equipment and Material
IN 97-065	Failures of High-Dose-Rate Remote Afterloading (HDR) Device Source Guide Tubes, Catheters, and Applicators
IN 97-075	Enforcement Sanctions Issued as a Result of Deliberate Violations of NRC Requirements
IN 97-091	Recent Failures of Control Cables Used on Amersham Model 660 Posilock Radiography Systems
IN 98-001	Thefts of Portable Gauges
IN 98-004	Enforcement Sanctions for Deliberate Violations of NRC Employee Protection Requirements
IN 98-005	Criminal History Record Information
IN 98-006	Unauthorized Use of License to Obtain Radioactive Materials, and its Implications under Expanded Title 18 of the U.S.Code
IN 98-010	Probable Misadminstrations Occurring During Intravascular Brachytherapy with Novoste Beta-Cath System
IN 98-012	Licensee’s Responsibilities Regarding Reporting and Follow-Up Requirements for Nuclear-Powered Pacemakers
IN 98-018	Recent Contamination Incidences Resulting From Failure to Perform Adequate Surveys

IN 99-004 Unplanned Radiation Exposures to Radiographers, Resulting from Failures to Follow Proper Radiation Safety Procedures

IN 99-009 Problems Encountered When Manually Editing Treatment Data on the Nucletron Microselectron-HDR (New) Model 105.999

IN 99-11 Incidents Involving the Use of Radioactive Iodine-131

IN 99-24 Broad-Scope Licensees' Responsibilities for Reviewing and Approving Unregistered Sealed Sources and Devices

IN 99-27 Malfunction of Source Retraction Mechanism in Cobalt-60 Teletherapy Treatment Units

BL 86-004 Defective Teletherapy Timer That May Not Terminate Treatment Dose

BL 88-006 Actions To Be Taken for the Transportation of Model No. SPEC 2-T Radiographic Exposure Device

BL 92-002 Safety Concerns Related to "End of Life" of Aging Theratronics Teletherapy Units

BL 92-003 Release of Patients After Brachytherapy

BL 93-001 Release of Patients After Brachytherapy Treatment With Remote Afterloading Devices

BL 95-001 Quality Assurance Program For Transportation of Radioactive Material

BL 97-001 Potential for Erroneous Calibration, Dose Rate, or Radiation Exposure Measurements with Certain Victoreen Model 530 and 530SIElectrometer/Dose-Meters

Others as selected by the First Line Supervisor

3. NUREGs (latest revision, where applicable)

NUREG 1400 Air Sampling in the Workplace

NUREG 1460 Guide to NRC Reporting and Recordkeeping Requirements

NUREG 1507 Minimum Detectable Concentrations with Typical Radiation Survey Instruments for Various Contaminants and Field Conditions

NUREG 1556 Consolidated Guidance About Materials Licenses

Vol. 1: Program-Specific Guidance About Portable Gauge Licenses

Vol. 2: Program-Specific Guidance About Industrial Radiography Licenses

Vol. 3: Applications for Sealed Source and Device Evaluation and Registration

Vol. 4: Program-Specific Guidance About Fixed Gauge Licenses

Vol. 5: Program-Specific Guidance About Self-Shielded Irradiator Licenses

Vol. 6: Program-Specific Guidance About 10 CFR Part 36 Irradiator Licenses

Vol. 7: Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope

Vol. 8: Program-Specific Guidance About Exempt Distribution Licenses

Vol. 9: Program-Specific Guidance About Medical Use Licenses

Vol. 10: Program-Specific Guidance About Master Material Licenses

Vol. 11: Program-Specific Guidance About Licenses of Broad Scope

Vol. 12: Program-Specific Guidance About Possession Licenses for Manufacturing and Distribution

Vol. 13: Program-Specific Guidance About Commercial Radiopharmacy Licenses

Vol. 14: Program-Specific Guidance About Well Logging, Tracer, and Field Flood Study Licenses

Vol. 15: Program-Specific Guidance About About Changes of Control and About Bankruptcy Involving Byproduct, Source, or Special Nuclear Material Licenses

Vol. 16: Program-Specific Guidance About Licenses Authorizing Distribution to General Licensees

Vol. 17: Program-Specific Guidance About Service Provider Licenses

Vol. 18: Program-Specific Guidance About Special Nuclear Material of Less than Critical Mass Licenses

Vol. 19: Guidance For Agreement State Licensees About NRC Form 241, Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, or Offshore Waters, and Guidance for NRC Licensees Proposing to Work in Agreement State Jurisdiction (Reciprocity)

Vol. 20: Program-Specific Guidance About Administrative Licensing Procedures

NUREG 1575 Multi-Agency Radiation Site Survey and Investigation Manual(MARSSIM)

NUREG 1600 General Statement of Policy and Procedures for NRC Enforcement Actions

NUREG/BR 0195 NRC Enforcement Manual

NUREG/BR 0216 Radioactive Waste: Production, Storage, Disposal

NUREG/BR 0240 Reporting Safety Concerns

NUREG/BR 0241 NMSS Handbook for Decommissioning Fuel Cycle and Materials Licenses

NUREG/CR 4884 Interpretation of Bioassay Measurements

NUREG/CR 5849 Manual for Conducting Radiological Surveys in Support of License Termination

Others as selected by the First Line Supervisor

4. Generic Letters

GL 86-011 Distribution of Products Irradiated in Research Reactors

GL 88-004 Distribution of Gems Irradiated In Research Reactors

GL 94-004 Voluntary Reporting of Additional Occupational Radiation Exposure Data

GL 95-09 Monitoring and Training of Shippers and Carriers of Radioactive Material

GL 99-001 Recent Nuclear Materials Safety and Safeguards Decision on Bundling Exempt Sources

Others as selected by the First Line Supervisor

5. Federal Register Notices

U. S. Nuclear Regulatory Commission, "Decommissioning, Recordkeeping and License Termination: Documentation Additions - Final Rule," *Federal Register* 58 (No. 141), 39628-39635, July 26, 1993

U. S. Nuclear Regulatory Commission, "General Requirements for Decommissioning Nuclear Facilities - Final Rule, *Federal Register* 53 (No. 123), 24018-24056, June 27, 1988

Others as selected by the First Line Supervisor

6. NRC Branch Technical Positions

Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material, April 1993

7. Policy and Guidance Directives

8. Standard Deficiency Paragraphs

9. Standard License Conditions

10. Licensing Checklists

11. Standard Review Plans

12. Sealed Source and Device Registry

13. Technical Assistance Requests

7. Through 13. as selected by the First Line Supervisor

B. The application of these guidance documents to the materials license review program should be studied in detail by the qualifying individual and covered by the First Line Supervisor in discussions, interviews, or oral quizzes.

A. A selection of currently applicable NRC MC and Inspection Procedure (IP) references with direct application to the materials license review program should be identified by the First Line Supervisor. The application of the specific sections to the materials license review 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	Followup
IP 92703	Followup 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

[1] Required for non-sealed source licensees.

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

| 5. LOW-LEVEL WASTE/WASTE MANAGEMENT

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

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. MATERIALS SAFETY PROGRAM

MC 1220 Processing of NRC Form 241, Inspection of Agreement State Licensees Operating under the Reciprocity Provisions of 10 CFR 150.20
MC 2800 Materials Inspection Program
| MC 2810 Materials Inspection Programs for Multisite, and Multiregional Broad Licenses
MC 2815 Construction and Preoperational Inspection of Panoramic, Wet-Source Storage Gamma Irradiators

| IP 87101 Performance Evaluation Factors
IP 87102 Maintaining Effluents from Materials Facilities As Low As Is Reasonably Achievable (ALARA)
| IP 87103 Inspection of Material Licensees Involved in an Incident or Bankruptcy Filing
| IP 87110 Industrial/Academic/Research Programs
| IP 87111 Materials Processor/Manufacturer Programs
| IP 87112 Irradiator Programs
| IP 87113 Well Logging Programs
| IP 87114 Fixed and Portable Gauge Programs
| IP 87115 Nuclear Medicine Programs
| IP 87116 Medical Teletherapy Programs
| IP 87117 Radiopharmacy Programs
| IP 87118 Brachytherapy Programs
| IP 87119 Medical Broad-Scope Programs
| IP 87120 Industrial Radiography Programs
| IP 87250 Locating Missing Materials Licensees

| 7. 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
IP 83895 Radiation Protection - Followup on Expired Licenses

| 8. 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

9. OTHER

MC 0700 Communication with Licensees
MC 1010 Independent Assessment and Analysis
MC 1201 Conduct of Employees
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 sections to the materials license review 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. 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.

1. American National Standards Institute (ANSI)

ANSI N13.1	Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities
ANSI N13.2	Guide for Administrative Practices in Radiation Monitoring
ANSI N13.5	Performance Specifications for Direct Reading and Indirect Reading Pocket Dosimeters for X and Gamma Radiation
ANSI N13.7	Criteria for Photographic Film Dosimeter Performance
ANSI N13.27	Performance Requirements for Pocket Sized Alarm Dosimeters and Alarm Ratemeters
ANSI N42.12	Calibration and Usage of Sodium Iodide Detection Systems
ANSI N42.13	Calibration and Usage of Dose Calibrator Ionization Chambers for the Assay of Radionuclides
ANSI N42.14	Calibration and Use of Germanium Spectrometers for the Measurement of Gamma Ray Emission Rates of Radionuclides
ANSI N42.15	Performance Verification of Liquid Scintillation Counting Systems
ANSI N43.3	General Radiation Safety - Installations Using Non-Medical X-Ray and Sealed Gamma-Ray Sources, Energies up to 10 MeV
ANSI 43.7	Safe Design and Use of Self Contained Dry Source Storage Gamma Irradiators (Category I)
ANSI N43.8	Classification of Industrial Ionizing Radiation Gaging Devices
ANSI N43.10	Safe Design and Use of Panoramic Wet Source Storage Gamma Irradiators (Category IV)
ANSI N44.1	Integrity and Test Specifications for Selected Brachytherapy Sources
ANSI N44.2	Leak Testing Radioactive Brachytherapy Sources

ANSI N44.3	Thyroid Radioiodine Uptake Measurements Using a Neck Phantom
ANSI N319	Personnel Neutron Dosimeters
ANSI N322	Inspection and Test Specifications for Direct and Indirect Reading Quartz Fiber Pocket Dosimeters
ANSI N323	Radiation Protection Instrumentation Test and Calibration
ANSI N449	Guidelines for Maintaining Cobalt-60 and Cesium-137 Teletherapy Equipment
ANSI N449.1	Procedures for Periodic Inspection of Cobalt-60 and Cesium-137 Teletherapy Equipment
ANSI N542	Sealed Radioactive Sources Classification
ANSI Z88.2	Practices for Respiratory Protection

ANSI Standards as selected and documented by the First Line Supervisor

2. NRC Accepted HP Computer Codes

   PC-DOSE
   Varskin
   RASCAL
   REMIT

3. National Council on Radiation Protection and Measurements (NCRP)

   NCRP Reports No. 8, 30, 37, 40, 41, 47, 49, 50, 57, 58, 59, 61, 65, 69, 70, 71, 84, 87, 93, 94, 95, 99, 100, 101, 102, 105, 107, 110, 111, 112, 114, 115, 116, 117, 121, 122, 123, 124, 125, 127, 129 |

   NCRP Commentaries No. 9, 11

4. International Commission on Radiological Protection (ICRP)

   ICRP 19, 23, 25, 26, 27, 28, 30 and Supplements, 35, 44, 51, 52, 53, 54, 56, 60, 61

5. U.S. Environmental Protection Agency (EPA) |

   EPA Federal Guidance Report No.11

6. Committee on the Biological Effects of Ionizing Radiation (BEIR)

   BEIR Reports (As selected by supervisor)

7. International Commission on Radiological Units (ICRU)

   ICRU 12, 18, 20, 22, 24, 32, 38

8. International Atomic Energy Agency (IAEA)

IAEA Safety Series No. 1, 25, 33, 38

IAEA Technical Report Series No. 120, 133

B. The First Line Supervisor should test the qualifying individual's knowledge of application of these codes and standards to the materials license review program by discussions, interviews, or oral quizzes.

Qualification Guide 7
Required (As Appropriate) Licensing Site Visits to Core Licensees

A. Each license reviewer shall (as appropriate) accompany certified license reviewers on at least four site visits to core licensees.

B. The following is a guide for material that should be studied and discussed with the license reviewer in charge during these site visits. The First Line Supervisor will discuss these items, as appropriate, following each site visit.

1. The Inspection Program (as it relates to review of licenses)

   MC 2800 Materials Inspection Program

2. Scheduling and Preparation for Site Visits

   MC 0300 Announced and Unannounced Inspections

3. Scope of Site Visit

4. Entrance/Exit Interviews

5. Conduct of Site Visit, Accumulation of Data

6. Post-Site Visit Activities (as they relate to review of licenses)

   MC 0610 Inspection Reports

   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 license reviewer 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	Standards for Protection 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 8.10	NRC Medical Event Assessment Program

B. Application of the selected NRC Management Directives to the materials license review 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 at Material Licensees

A. A selection of significant historical materials 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 license reviewer and go over recommendations made, lessons learned, and changes identified to prevent recurrence. The relevance of the event to the overall materials license review program should be stressed.

A. The First Line Supervisor will select documents from the file of a licensed facility and direct their review by the qualifying individual. The qualifying individual will study in detail the selected documents. The selection should be documented. Such documents would include:

1. Initial license application and facility description

2. Associated licensing correspondence (NRC staff comments and licensee responses)

3. License renewal applications and associated NRC correspondence

4. Copy of the license

5. Inspection reports related to that licensee's activities

B. The First Line Supervisor will discuss in detail with the qualifying individual the selected documents and their relation to the overall material license review program.

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