

SECTION VI

NMSS SPENT FUEL PROJECT OFFICE QUALIFICATION JOURNAL

Applicability

The NMSS Spent Fuel Project Office (SFPO) Qualification Journal implements NRC Manual Chapter 1246, Appendix A, Section VI, by establishing the minimum training requirements for a new staff member in SFPO. These requirements provide a basis of knowledge for: (1) performing technical reviews of various types of radioactive material package applications; (2) performing licensing for radioactive material package and spent fuel storage designs; (3) performing activities associated with the storage of spent fuel; and (4) performing safety inspections of entities engaged in the design, fabrication, and use of packages and installations for the transportation of radioactive materials and the storage of spent nuclear reactor fuel.

The SFPO Qualification Journal serves as a guideline for the development of a Program Office Qualification Journal, and establishes the minimum training requirements consistent with NRC Manual Chapter 1246. The Program Office Qualification Journal must provide traceable documentation to show that minimum requirements are met for each SFPO staff member.

The SFPO 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 block(s). The corresponding qualification guide establishes the minimum knowledge levels or areas of study that must be completed for each signature card.

Discussion

This Qualification Journal contains a qualification summary sheet, qualification guides, and signature cards. Signature Cards 1 through 7 are to be completed by each new staff member, irrespective of assigned work group. Signature Cards 8 through 10 are specific to the various work groups within SFPO. The new staff member is expected to complete only the signature card(s) applicable to his/her assigned work group. It may not be necessary to complete every requirement. At the supervisor's discretion, requirements may be deleted, or other requirements added, depending on the new staff member's previous experience, training, etc.

In order to support the review of upper tier documents, programs, and policies, the staff member's supervisor should consider assigning one or more specific reactor facilities, fuel fabrication and storage facilities (e.g., ISFSIs), and/or certificate of compliance holders/licensees, as reference facilities. The selection of a reference facility is intended to provide the staff member's management with the ability to tailor the qualification process to the experience and training level of the staff member, and to meet SFPO's needs.

The SFPO staff member is expected to use the most current version or revision of each document cited in this Journal. Most of the documentation is readily available either on the NRC's internal web site, the NRC's Agencywide Documents Access and Management System (ADAMS), or the SFPO library. Some hard copies may exist elsewhere within SFPO, but caution should be exercised to verify that they are the current revisions before using them.

Unless otherwise indicated, the staff member is to initial and date each appropriate requirement sign-off and insert the appropriate revision number after the reference.

It is recognized that some of the required formal training courses may not be immediately available. At his/her discretion, the staff member's supervisor may substitute an alternative course, provide another method to meet the requirement, or delete the requirement altogether. Any such change should be documented in this Qualification Journal.

This Qualification Journal incorporates several "checklists" currently used by supervisors and secretaries to assist in new staff member orientation and indoctrination. When appropriately completed, they should be included with this Qualification Journal. The use and/or amending of these checklists is at the discretion of appropriate supervisor or secretary.

The time necessary to complete this Qualification Journal will vary, depending upon the new staff member's previous experience and education, but within one year is SFPO management's expectation. However, the availability of required training courses and the new staff member's assigned workload may prolong the time period.

Attached to this Qualification Journal is an Appendix, *Post-Qualification Recommended Training/Reading*, listing a number of training courses and reading material which are recommended for further professional development following initial qualification. While none of this material is required for initial qualification, SFPO staff may wish to include some of these items in their individual development plans.

**SFPO QUALIFICATION JOURNAL
QUALIFICATION SUMMARY SHEET**

TECHNICAL REVIEWER
LICENSING PROJECT MANAGER
TRANSPORTATION PACKAGING AND DRY STORAGE SYSTEM SAFETY INSPECTOR

Name: _____

Position Title: _____

Section: _____

Date Training Started: _____

SIGNATURE CARDS

CARD 1, GENERAL ORIENTATION

Supervisor Date

CARD 2, NRC FAMILIARIZATION READING

Supervisor Date

CARD 3, 10 CFR REGULATIONS

Supervisor Date

CARD 4, NRC MANAGEMENT DIRECTIVES

Supervisor Date

CARD 5, NRC ORIENTATION TRAINING

Supervisor Date

CARD 6, NMSS/SFPO ORIENTATION READING

Supervisor Date

CARD 7, NMSS/SFPO TRAINING

Supervisor Date

CARD 8, SPENT FUEL LICENSING SECTION

Supervisor Date

CARD 9, TECHNICAL REVIEW SECTIONS A & B

Supervisor Date

CARD 9A, CONTAINMENT/CONFINEMENT

Supervisor Date

CARD 9B, CRITICALITY

Supervisor Date

CARD 9C, MATERIALS

Supervisor Date

CARD 9D, SHIELDING/RAD PRO

Supervisor Date

CARD 9E, STRUCTURAL

Supervisor Date

CARD 9F, THERMAL

Supervisor Date

CARD 10, TRANSPORTATION AND STORAGE SAFETY AND INSPECTION SECTION

CARD 10A, REQUIRED READING

Supervisor Date

CARD 10B.1, CORE FORMAL TRAINING

Supervisor Date

CARD 10B.2, REGULATORY GUIDES

Supervisor Date

CARD 10B.3, INFO NOTICES, ETC.

Supervisor Date

CARD 10B.4, NUREGs

Supervisor Date

CARD 10B.5, NRC INSPECTION MANUAL

Supervisor Date

CARD 10B.6, INDUSTRY CODES/STDs

Supervisor Date

CARD 10B.7, INSPECTION ACCOMPANIMENT

Supervisor Date

CARD 10B.8, SAFETY ANALYSIS REPORTS

Supervisor Date

QUALIFICATION BOARD CERTIFICATION

Date of Oral Board:_____

Successful Completion of Oral Board:

_____	_____
Chairman	Date
_____	_____
Member	Date
_____	_____
Member	Date

Qualification Completion / Inspector Certification Memo Issued:

_____	_____
Supervisor	Date

CARD 1
GENERAL ORIENTATION

(ALL STAFF)

NRC Welcoming Orientation completed

Spent Fuel Project Office Orientation Checklist completed *(if used)*

Secretary Date

Supervisor's Checklist completed *(if used)*

Supervisor Date

CARD 2
NRC FAMILIARIZATION READING

(ALL STAFF)

The following documentation should be read to develop a general understanding of the USNRC as an organization, from where its regulatory authority is derived, and the duties and responsibilities of its various offices. This information should be discussed with the staff member's supervisor (or as directed).

NUREG-1770, "Occupant Emergency Plan" _____

NUREG/BR-0118, "The White Flint North Complex" _____

NUREG/BR-0099, "The NRC Fact Sheet" _____

NUREG-1350, "USNRC Information Digest" _____

NUREG/BR-0164, "NRC Regulator of Nuclear Safety" _____

NUREG/BR-0298, "Nuclear Power Plant Licensing Process" _____

NUREG/BR-0217, "The Regulation and Use of Radioisotopes in Today's World" _____

NUREG/BR-0216, "Radioactive Waste: Production, Storage, Disposal" _____

NUREG/BR-0292, "Safety of Spent Fuel Transportation" _____

NUREG/BR-0010, "Citizen's Guide to U.S. NRC Information" _____

NUREG/BR-0215, "Public Involvement in the Nuclear Regulatory Process" _____

NUREG/BR-0282, "Nuclear Research Programs to ensure Public Health and Safety" _____

NUREG/BR-0175, "A Short History of Nuclear Regulation, 1946-1999" _____

NUREG-0325, "USNRC Organizational Charts and Functional Statements" _____

NUREG-1614, "USNRC Strategic Plan" _____

NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions" _____

CARD 3
TITLE 10, CODE OF FEDERAL REGULATIONS (10 CFR)
(ALL STAFF)

Part 1, STATEMENTS OF ORGANIZATION AND GENERAL INFORMATION _____

Part 2, RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS AND ISSUANCE OF ORDERS

Part 9, PUBLIC RECORDS _____

Part 19, NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS: INSPECTION AND INVESTIGATIONS

Part 20, STANDARDS FOR PROTECTION AGAINST RADIATION _____

Part 21, REPORTING OF DEFECTS AND NONCOMPLIANCE _____

Part 25, ACCESS AUTHORIZATION FOR LICENSEE PERSONNEL _____

Part 26, FITNESS FOR DUTY PROGRAMS _____

Part 50, DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES _____

Part 51, ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED
REGULATORY FUNCTIONS _____

Part 71, PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL (*Including the Statements of
Consideration*) _____

Part 72, LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-
LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE (*Including the
Statements of Consideration*) _____

Part 73, PHYSICAL PROTECTION OF PLANTS AND MATERIALS _____

Part 170, FEES FOR FACILITIES, MATERIALS, IMPORT AND EXPORT LICENSES, AND OTHER REGULATORY
SERVICES UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED _____

Part 171, ANNUAL FEES FOR REACTOR 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

CARD 4
NRC MANAGEMENT DIRECTIVES

(ALL STAFF)

2.7	"Personal Use of Information Technology"	_____
3.1	"Freedom of Information Act"	_____
3.2	"Privacy Act"	_____
3.5	"Attendance at NRC Staff-Sponsored Meetings"	_____
7.5	"Ethics Counseling and Training"	_____
8.8	"Management of Allegations"	_____
10.1	"Appointments, General Employment Issues, Details, and Position Changes"	_____
10.14	"Employee Trial Period"	_____
10.41	"Pay Administration"	_____
10.42	"Hours of Work and Premium Pay"	_____
10.43	"Time and Attendance Reporting"	_____
10.62	"Leave Administration"	_____
10.67	"Non-SES Performance Appraisal System"	_____
10.77	"Employee Development and Training"	_____
10.101	"Employee Grievances"	_____
10.130	"Safety and Health Program Under the Occupational Safety and Health Act"	_____
10.131	"Protection of NRC Employees Against Ionizing Radiation"	_____
10.159	"Differing Professional Views or Opinions"	_____
12.1	"NRC Facility Security Program"	_____
13.4	"Transportation Management"	_____
14.1	"Official Temporary Duty Travel" (http://www.internal.nrc.gov/ADM/DAS/cag/Management_Directives/index.html)	_____

CARD 5
NRC ORIENTATION TRAINING

(ALL STAFF)

Orientation Classes Offered By Professional Development Center

NRC: What It Is and What It Does

Regulatory Process

Orientation Self-Study Classes Offered On NRC Website *(As directed by the supervisor)*

PeopleSoft Human Resources Management System (HRMS or time and attendance)

Agencywide Documents Access and Management System (ADAMS)

Allegations

Computer Security Awareness

Other Orientation Classes Offered Throughout The Year *(As directed by the supervisor)*

Handling Sensitive Material

New Employee Ethics Training scheduled by OGC

Attendance At One (1) Each Of The Following Meetings (time - about ½ day each)

Advisory Committee on Nuclear Waste (ACNW)

Commissioners' Meeting

Miscellaneous

Tour the NRC Incident Response Center

CARD 6
NMSS/SFPO ORIENTATION READING

(ALL STAFF)

General

NUREG/BR-0137, "Nuclear Material Safety and Safeguards" _____

SFPO Office Instructions _____
(ADAMS Document Manager Folder: "NMSS/NMSS-SFPO/Office Instructions")

SFPO Operating Plan _____

Interim Staff Guidance (ISG) memoranda (*all*) _____
(<http://www.nrc.gov/reading-rm/doc-collections/isg/spent-fuel.html>)

Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure" _____

10 CFR Part 71

NUREG/BR-0111, "Transporting Spent Fuel" _____

49 CFR Parts 171 - 177 (*familiarization*) _____

NUREG/CR-6407, "Classification of Transportation Packages and Dry Spent Fuel Storage
System Components According to Importance to Safety" _____

NUREG-0383, "Directory of Certifications" (*3 volumes*) _____

IAEA Safety Standard No. TS-R-1, "Regulations for the Safe Transport of Radioactive Material" _____

US DOT/NRC Memorandum of Understanding, dated 7/02/79 (FRN 44FR38690) _____

NUREG-1609, "SRP for Transportation Packages for Radioactive Material" _____

NUREG-1617, "SRP for Transportation Packages for Spent Nuclear Fuel" _____

NUREG/CR-5502, "Engineering Drawings for 10CFR71 Package Approvals" _____

Regulatory Guide 7.9“Standard Format and Content of Part 71 Applications for Approval of Packaging of Type B, Large Quantity, and Fissile Radioactive Material” _____

10 CFR Part 72

NUREG-1571, “Information Handbook on ISFSIs” _____

NUREG-1536, “SRP for Dry Cask Storage Systems” _____

NUREG-1567, “SRP for Spent Fuel Dry Storage Facilities” _____

Regulatory Guide 3.61, “Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask” _____

NUREG 1748, “Environmental Assessments NMSS” _____

Quality Assurance

Regulatory Guide 1.28, “Quality Assurance Requirements” _____

CARD 7
NMSS/SFPO TRAINING

(ALL STAFF)

(all conducted via the PDC and as directed by supervision)

H-100, "Site Access Training"

OR

H-102, "NMSS Radiation Worker Training"

P-400, "Introduction to Risk Assessment in NMSS" *(NOTE: This is a requirement of the NMSS Office Director)*

Communicating with the Public

Conducting and Participating in Meetings

Effective Briefing Techniques

Media Training Workshop

Technical Writing for Supervisors and Their Staff

Acquisition for Project Managers: *(NOTE: This is a requirement of the NMSS Office Director.)*

Overview (3 hrs.)

Developing an Independent Government Cost Estimate (3 hrs.)

Preparing Statements of Work (6 hrs.)

Organizational Conflicts of Interest (3 hrs.)

Contract Administration (6 hrs.)

WORK GROUP SPECIALTY TRAINING

The following signature cards contain the specialty training requirements for each Section in SFPO:

- Spent Fuel Licensing Section (SFLS)
- Technical Review Sections A & B (TRA/B)
- Transportation and Storage Safety and Inspection Section (TSSI)

Each signature card may contain a mixture of reading and formal classroom instruction. The employee's supervisor has the discretion to modify the requirements as needed based on the employee's previous experience, education, and course availability. The employee's supervisor may add, delete, or substitute with other material (e.g., from the Appendix), for course(s) which will not be available during the nominal one-year qualification period.

There are six technical specialty disciplines comprising the bulk of the technical evaluations performed by the technical review staff: (1) containment/confinement; (2) criticality; (3) materials; (4) shielding/radiological protection; (5) structural; and (6) thermal. The employee's supervisor will assign the employee one or more technical specialty disciplines. The employee's supervisor and/or the technical specialty team leader(s) (TSTLs), if so designated, will determine what training within a technical specialty discipline is required based on the employee's educational background and experience. The technical specialty training listed here may not be all-inclusive, and may be adjusted as desired by the employee's supervisor or TSTL.

The Transportation and Storage Safety Inspection (TSSI) section signature cards consist of two sets. The first set, represented by Signature Card 10A, covers the specialty requirements for all TSSI personnel. The second set, represented by Signature Cards 10B.1 through 10B.8, is for transportation and storage safety inspector candidates only. Signature Cards 10B.1 - 10B.8 are part of a condensation of the former NRC Inspection Manual Chapter 1246, Appendix A, Section VI, "NMSS Headquarters Transportation Packaging and Dry Storage System Safety Inspector," qualification program with redundancies with other parts of the SFPO Qualification Journal removed, except as noted. Unnecessary and obsolete requirements have also been deleted. Consequently, the transportation and storage safety inspector candidates must complete Signature Cards 1 through 7 and Cards 10A and 10B in the Transportation and Storage Safety and Inspection section of the SFPO Qualification Journal.

CARD 8
SPENT FUEL LICENSING SECTION/WORK GROUP

Job Performance Measures

Perform one (1) licensing action as a project manager from the receipt of an licensing request (e.g., new package application, amendment request) to process completion (e.g., new certificate of compliance, amendment to an existing certificate of compliance), under the oversight of an experienced SFLS project manager.

SFLS Project Manager

Become familiar with the technical review process, including RAls and SERs, under the oversight of the appropriate technical specialty team leader (TSTL) and/or supervisor in the employee's assigned technical discipline (selected based upon the employee's experience and education). *This JPM is estimated to take approximately one week over a period of time to complete.*

TSTL / Supervisor

Site visit to observe DSC loading/dry run activities.

Reading

IN 84-050 Clarification of Scope of Quality Assurance Programs for Transport Packages Pursuant to 10 CFR 50, Appendix B

IN 87-033 Applicability of 10 CFR Part 21 to Nonlicensees

IN 91-021 Inadequate Quality Assurance Program of Vendor Supplying Safety-Related Equipment

IN 91-039 Compliance with 10 CFR Part 21, "Reporting of Defects and Noncompliance

IN 95-029 Oversight of Design and Fabrication Activities for Metal Components Used in Spent Fuel Dry Storage Systems

IN 96-040 Deficiencies in Material Dedication and Procurement Practices and in Audits of Vendors

IN 97-051 Problems Experienced Loading and Unloading Spent Nuclear Fuel Storage and
Transportation Casks

IN 97-057 Leak Testing of Packaging Used in the Transport of Radioactive Material

IN 99-029 Authorized Contents of Spent Fuel Casks

BL 96-04 Chemical, Galvanic, or Other Reactions in Spent Fuel Storage and
Transportation Casks

CARD 9
TECHNICAL REVIEW SECTIONS/WORK GROUPS A & B

(Note: Indicate assigned specialty group(s) by checking the box after group name.)

All Disciplines

Job Performance Measures

Perform one (1) technical review, including a request for additional information (RAI), if appropriate, and safety evaluation report (SER) under the oversight of the appropriate specialty team leader and/or supervisor, in the employee's assigned technical discipline.

TSTL / Supervisor

Become familiar with the licensing process from the receipt of an licensing request (e.g., new package application, amendment request) to process completion (e.g., new certificate of compliance, amendment to an existing certificate of compliance), by working with an experienced SFLS project manager. *This JPM is estimated to take approximately one week over a period of time to complete.*

SFLS Project Manager

CARD 9A
CONTAINMENT/CONFINEMENT []

NUREG/CR-6487, "Containment Analysis for Type B Packages with Various Contents"

RG 7.4, "Leakage Tests on Packages for Shipment of Radioactive Material"

ANSI N14.5, "Leakage Tests on Packages for Shipment"

CARD 9B
CRITICALITY []

NUREG/CR-5661, "Recommendations for Preparing Criticality Safety Evaluations of Transportation Packages"

NUREG/CR-6361, "Criticality Benchmark Guide for Light-Water Reactor Fuel in Transportation and Storage Packages"

ANSI/ANS-8.1, "Nuclear Criticality Safety in Operations with Fissionable Material Outside Reactors"

ANSI/ANS-8.15, "Nuclear Criticality Control of Special Actinide Elements"

ANSI/ANS-8.17, "Handling, Storage, and Transport of LWR Fuel Outside Reactors"

ANSI/ANS-8.21, "Fixed Neutron Absorbers"

CARD 9C
MATERIALS []

ASME B&PVC, Section II, Part C, "Specifications for Welding Rods, Electrodes, and Filler Metals"

ASME B&PVC, Section II, Part D, "Material Properties"

ASTM Specifications (*general familiarization*)

CARD 9D
SHIELDING/RADIOLOGICAL PROTECTION

49 CFR 173, Subpart I _____

10 CFR 835 _____

40 CFR 190 _____

40 CFR 191 _____

ANSI/ANS 6.1.1, "Flux to Dose Rate Conversion Factors" _____

ANSI N14.1, "UF6 Packages" _____

Reg Guide 8.8, "Information Relevant to Ensuring the Occupational Radiation Exposures at
Nuclear Power Stations Will Be As Low As Reasonably Achievable" _____

Reg Guide 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures As
Low As Reasonably Achievable" _____

CARD 9E
STRUCTURAL []

RG 7.6, "Design Criteria for the Structural Analysis of Shipping Cask Containment Vessels" _____

RG 7.8, "Load Combinations for the Structural Analysis of Shipping Casks for Radioactive Material" _____

NUREG/CR-1815, "Recommendations for Protecting Against Failure by Brittle Fracture in Ferritic Steel Shipping Containers Up to Four Inches Thick" _____

NUREG/CR-4554, "SCANS (Shipping Cask Analysis System) A Microcomputer Based Analysis System for Shipping Cask Design Review" _____

NUREG/CR-6007, "Stress Analysis of Closure Bolts for Shipping Casks" _____

CARD 9F
THERMAL []

RG 3.54, "Spent Fuel Heat Generation in an Independent Spent Fuel Storage Installation"

ASTM Standard Practice for Thermal Qualification of Radioactive Material Packages"

CARD 10
TRANSPORTATION AND STORAGE SAFETY AND INSPECTION SECTION/WORK GROUP

CARD 10A
REQUIRED READING

49 CFR Part 397, Subpart D	_____
NUREG-1608, "Categorizing and Transporting LSA and SCO"	_____
NUREG-1660, "US Specific Schedules of Regulations for Transport of Specified Types of Radioactive Materials Consignments"	_____
NUREG/BR-0024, "Working Safely in Gamma Radiography"	_____
RAMREG-001-98, "Radioactive Material Regulations Review" (USDOT)	_____
Atomic Energy Act of 1954, as amended	_____
Energy Reorganization Act of 1974, as amended	_____
Nuclear Waste Policy Act of 1982, as amended	_____
NUREG/BR 0195, "NRC Enforcement Manual"	_____

**CARD 10B.1
CORE FORMAL TRAINING**

	<u>Initials</u>	<u>Date</u>
Fundamentals of Inspection Course (G-101)	_____	_____
Inspecting for Performance Course (G-303 or G-304)	_____	_____
Effective Communications for NRC Inspectors	_____	_____
OSHA Indoctrination Course (G-111)	_____	_____
Site Access Training (H-100)	_____	_____

CARD 10B.2
REGULATORY GUIDES

The inspector's supervisor should discuss these policies and practices with the inspector to ensure that he/she has a full and complete understanding of the material.

- | | | |
|------|---|-------|
| 1.28 | Quality Assurance Requirements (Design and Construction) | _____ |
| 1.33 | Quality Assurance Program Requirements (Operation) | _____ |
| 3.60 | Design of an Independent Spent Fuel Storage Installation (Dry Storage) | _____ |
| 3.61 | Standard Format and Content for a Topical Safety Analysis Report for a Spent Fuel Dry Storage Cask | _____ |
| 7.7 | Administrative Guide for Verifying Compliance with Packaging Requirements for Shipments of Radioactive Materials | _____ |
| 7.9 | Standard Format and Content of Part 71 Applications for Approval of Packaging of Type B, Large Quantity, and Fissile Radioactive Material | _____ |
| 7.10 | Establishing Quality Assurance Programs for Packaging Used in the Transport of Radioactive Material | _____ |
| 8.29 | Instruction Concerning Risks from Occupational Radiation Exposure | |

CARD 10B.3
INFORMATION NOTICES (IN), BULLETINS (BL) AND GENERIC LETTERS (GL)

The inspector's supervisor should discuss these policies and practices with the inspector to ensure that he/she has a full and complete understanding of the material.

IN 84-050	Clarification of Scope of Quality Assurance Programs for Transport Packages Pursuant to 10 CFR 50, Appendix B	_____
IN 87-033	Applicability of 10 CFR Part 21 to Nonlicensees	_____
IN 91-021	Inadequate Quality Assurance Program of Vendor Supplying Safety-Related Equipment	_____
IN 91-039	Compliance with 10 CFR Part 21, "Reporting of Defects and Noncompliance	_____
IN 95-029	Oversight of Design and Fabrication Activities for Metal Components Used in Spent Fuel Dry Storage Systems	_____
IN 96-040	Deficiencies in Material Dedication and Procurement Practices and in Audits of Vendors	_____
IN 97-051	Problems Experienced Loading and Unloading Spent Nuclear Fuel Storage and Transportation Casks	_____
IN 97-057	Leak Testing of Packaging Used in the Transport of Radioactive Material	_____
IN 99-029	Authorized Contents of Spent Fuel Casks	_____
BL 96-04	Chemical, Galvanic, or Other Reactions in Spent Fuel Storage and Transportation Casks	_____
GL 91-05	Licensee Commercial-Grade Procurement and Dedication Programs	_____

CARD 10B.4
NUREGs

The inspector's supervisor should discuss these policies and practices with the inspector to ensure that he/she has a full and complete understanding of the material.

NUREG 1600	General Statement of Policy and Procedures for NRC Enforcement Actions: <i>(Electronic version only)</i>
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NUREG/CR-6314	Quality Assurance Inspections for Shipping and Storage Containers
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NUREG/CR-6407	Classification of Transportation Packaging and Dry Spent Fuel Storage System Components According to Importance to Safety
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CARD 10B.5
NRC INSPECTION MANUAL CHAPTERS (MC) AND INSPECTION PROCEDURES (IP)

The inspector's supervisor should discuss these policies and practices with the inspector to ensure that he/she has a full and complete understanding of the material.

MC 0102	Oversight and Objectivity of Inspectors and Examiners at Reactor Facilities	_____
MC 0300	Announced and Unannounced Inspections	_____
MC 0610	Inspection Reports	_____
MC 0620	Inspection Documents and Records	_____
MC 1330	Response to Transportation Accidents Involving Radioactive Materials	_____
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 2681	Physical Protection and Transport of SNM and Irradiated Fuel Inspections of Fuel Facilities	_____
MC 2690	Inspection Program For Dry Storage of Spent Reactor Fuel at Independent Spent Fuel Storage Installations	_____
MC 2700	Vendor Inspection Program	_____
IP 60851	Design Control of ISFSI Components	_____
IP 60852	ISFSI Component Fabrication By Outside Fabricators	_____
IP 60853	On-Site Fabrication of Components and Construction of an ISFSI	_____
IP 60854	Preoperational Testing of an ISFSI	_____
IP 60855	Operation of an ISFSI	_____
IP 60856	Review of 10 CFR 72.212(b) Evaluations	_____

IP 60857 Review of 10 CFR 72.48 Evaluations

IP 86001 Design, Fabrication, Testing, and Maintenance of Transportation Packagings

CARD 10B.6
INDUSTRY CODES AND STANDARDS

The inspector's supervisor should discuss these policies and practices with the inspector to ensure that he/she has a full and complete understanding of the material.

American Society of Mechanical Engineers (ASME)/NQA-1, Quality Assurance Program
Requirements for Nuclear Facilities

ASME Boiler and Pressure Vessel Code (*applicable parts of Sections III, V, and IX*)

CARD 10B.7
INSPECTION ACCOMPANIMENTS

The inspector should accompany certified inspectors on at least four (4) inspections. If possible, two of these inspections should be of 10 CFR Part 71 activities and two of 10 CFR Part 72 activities. The following is a guide for material that the inspector should study and discuss with the lead inspector during these inspection accompaniments. The inspector's supervisor may also discuss these items, as appropriate, following any of the inspection accompaniments.

1. The Inspection Program
2. Scheduling and Preparation for Inspections
3. Scope of Inspection
4. Entrance/Exit Interviews
5. Conduct of Inspection and Accumulation of Data
6. Post-inspection Activities of Inspectors
7. MCs 0610 and 2690 Inspection Reports (including the use of Form 591S)

Record of Accompaniments

- | | | |
|----|---|---------------------------|
| 1. | Location/Facility:
Inspection Dates:
Inspection Type (71/72):
Successful Completion: | <hr/> <hr/> <hr/> <hr/> |
| | | Lead Inspector/Supervisor |
| 2. | Location/Facility:
Inspection Dates:
Inspection Type (71/72):
Successful Completion: | <hr/> <hr/> <hr/> <hr/> |
| | | Lead Inspector/Supervisor |
| 3. | Location/Facility:
Inspection Dates:
Inspection Type (71/72):
Successful Completion: | <hr/> <hr/> <hr/> <hr/> |
| | | Lead Inspector/Supervisor |
| 4. | Location/Facility:
Inspection Dates:
Inspection Type (71/72):
Successful Completion: | <hr/> <hr/> <hr/> <hr/> |
| | | Lead Inspector/Supervisor |

CARD 10B.8
SAFETY ANALYSIS REPORTS

The inspector should become generally familiar with Safety Analysis Reports for the packaging or storage systems for which the NRC has issued a certificate of compliance and the independent spent fuel storage facilities for which the NRC has issued licenses.

The inspector should review the appropriate sections of a facility's Technical Specifications and Updated Final Safety Analysis Report (USAR) with an emphasis on the application of Technical Specifications to the inspection program.

After the inspector has reviewed a USAR, a facility Technical Specifications, and a Safety Analysis Report, he/she should be able to specifically address the application of the references to the inspection program. The inspector may be asked to demonstrate your knowledge through discussions, interviews or quizzes. These discussion activities should be conducted with senior inspectors to illustrate recent application of regulatory guidance to the inspection program. Alternatively, discussions of a similar nature can be held with the inspector's supervisor. Completion of the discussion activities should be documented below.

Discussions completed: _____

Supervisor

Date

APPENDIX

Post-Qualification Recommended Training/Reading

The training courses and reading material included in this appendix are recommended to the SFPO staff for professional development following the successful completion of the qualification program. Selected material could be included in an IDP or considered for continuing training on a periodic basis. (For example, SFPO transportation inspectors attend headquarters and regional counterpart meetings and workshops.) This list is not all-inclusive and the staff is encouraged to consider alternatives. Training listed for a specific work group may well be of benefit to other work groups, and should be considered.

GENERAL ORIENTATION

Atomic Energy Act of 1954, as amended

Energy Reorganization Act of 1974, as amended

Nuclear Waste Policy Act of 1982, as amended

NUREG/BR-0195, "NRC Enforcement Manual"

NUREG/BR-0101, "Procedures for the Administration of Technical Assistance Contracts"

Attend the following meetings (time - about ½ day each):

Advisory Committee on Reactor Safeguards (ACRS)

Committee to Review Generic Requirements (CRGR)

WORK GROUP SPECIALTY TRAINING

Spent Fuel Licensing Section

Acquisition for Project Managers (also see **SIGNATURE CARD 7**):

Developing Proposal Evaluation Factors (3 hrs.)

Source Evaluation Panel Procedures (6 hrs.)

Negotiation of Project Terms and Conditions (6 hrs.)

Property Management (3 hrs.)

Closing Out the Contract (3 hrs)

Basic Health Physics Technology

Conflict Resolution

Ethics in Government

Managing Change

Small Group Dynamics

H-308, "Transportation of Radioactive Materials" (DOE)

Technical Review Sections A/B

Criticality

University of New Mexico, "Nuclear Criticality Safety" (short course)

LANL, "Basic Criticality Safety" (5-day course)

LANL, "Introduction to MCNP"

ORNL, "SCALE Criticality Safety (CSAS/KENO V.a)"

ORNL, "SCALE KENO VI Training Course"

AEA Technology, "Introduction to the MONK Code"

Materials

ASME/ASM Fracture Mechanics course

NACE Corrosion/Coatings course

ASME B&PVC, Section IX, "Welding and Brazing"

Shielding/Radiological Protection

Computer Codes: SAS2H, MICROSHIELD: ORIGEN 2.1, MCBEND, DORT/TORT, MCNP, SAS1, SAS4, ORIGENARP, ORIGENS.

H-117, "Introduction to Health Physics"

H-308, "Transportation of Radioactive Material"

ORNL, "SCALE Shielding & Source Terms"

Harvard School of Public Health, "Analyzing Risk: Science, Assessment, and Management"

Harvard School of Public Health, "Nuclear Emergency Planning"

Harvard School of Public Health, "Radioactivity in the Environment: Risk, Assessment, and Measurement"

EPA 410-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents"

Thermal

"ANSYS Introduction" (*Part 1*) course

"ANSYS Heat Transfer" course

Transportation and Storage Safety and Inspection Section

H-308, "Transportation of Radioactive Material"