

APPENDIX B

INDUSTRIAL/ACADEMIC/RESEARCH INSPECTION REFERENCES

1. ORGANIZATION AND SCOPE OF PROGRAM

NUREG-1556, Vol. 7, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance About Academic, Research and Development, and Other Licenses of Limited Scope."

License application and applicable license conditions.

2. MANAGEMENT OVERSIGHT

A. Radiation Safety Committee

Applicable license conditions.

B. Radiation Safety Officer

Applicable license conditions.

C. Audits, Reviews, or Inspections

10 CFR 20.1101

Radiation protection programs.

10 CFR 20.2102

Records of radiation protection programs.

Applicable license conditions.

D. ALARA

10 CFR 20.1101

Radiation protection programs.

E. Authorized Users

Applicable license conditions.

3. FACILITIES

A. Access Control

10 CFR 20.1601, 1602

Control of access to high/very high radiation areas.

10 CFR 20.1801

Security of stored material.

10 CFR 20.1802

Control of material not in storage.

Applicable license conditions.

B. Engineering Controls

10 CFR 20.1101 Radiation protection programs.
10 CFR 20.1701 Use of process or other engineering controls.
Applicable license conditions.

4. EQUIPMENT AND INSTRUMENTATION

A. Survey Instruments

10 CFR 20.1501 General.
10 CFR 20.1701 Use of Process or Other Engineering Controls.
10 CFR 20.2103 Records of Surveys.
Applicable license conditions.

B. Safety Component Defects

10 CFR 21.21 Notification of failure to comply or existence of a defect and its evaluation.

5. MATERIAL USE, CONTROL, AND TRANSFER

A. License and applicable license conditions.

B. Security and Control

10 CFR 20.1003 Definitions (restricted area and unrestricted area).
10 CFR 20.1801 Security of stored material.
10 CFR 20.1802 Control of material not in storage.

C. Receipt and Transfer of Licensed Material

10 CFR 20.1302 Compliance with dose limits for individual members of the public.
10 CFR 20.1906 Procedures for receiving and opening packages.
10 CFR 20.1501 Surveys.
10 CFR 20.2103 Records of surveys.
10 CFR 30.41 Transfer of byproduct material.
10 CFR 30.51 Records of receipt and transfer.

6. AREA RADIATION SURVEYS AND CONTAMINATION CONTROL

A. Area Surveys

10 CFR 20.1302	Compliance with dose limits for individual members of the public.
10 CFR 20.1501	General.
10 CFR 20.2103	Records of surveys.
10 CFR 20.2107	Records of dose to individual members of the public.
Applicable license conditions.	

B. Leak Tests and Inventories

Applicable license conditions.

7. TRAINING AND INSTRUCTIONS TO WORKERS

A. General

10 CFR 19.12	Instruction to workers.
Knowledge of 10 CFR Part 20 radiation protection procedures and requirements.	
Applicable license conditions.	

8. RADIATION PROTECTION

A. Radiation Protection Program

1. Exposure evaluation

10 CFR 20.1501	General.
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2. Programs

10 CFR 20.1101	Radiation protection programs.
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B. Dosimetry

1. Dose Limits

10 CFR 20.1201	Occupational dose limits for adults.
10 CFR 20.1202	Compliance with requirements for summation of external and internal doses.
10 CFR 20.1207	Occupational dose limits for minors.
10 CFR 20.1208	Doses to an embryo/fetus.

2. External

10 CFR 20.1203	Determination of external dose from airborne radioactive material.
10 CFR 20.1501	General.
10 CFR 20.1502	Conditions requiring individual monitoring of

external and internal occupational dose.
Applicable license conditions.

3. Internal

10 CFR 20.1204
10 CFR 20.1502

Determination of internal exposure.
Conditions requiring individual monitoring of
external and internal occupational dose.
Respiratory protection and controls to
restrict internal exposure in restricted areas.

10 CFR 20, Subpart H

C. Records

10 CFR 20.2102
10 CFR 20.2103
10 CFR 20.2104
10 CFR 20.2106

Records of radiation protection programs.
Records of surveys.
Determination of prior occupational dose.
Records of individual monitoring results.

9. RADIOACTIVE WASTE MANAGEMENT

A. Disposal

10 CFR 20.1904
10 CFR 20.2001
10 CFR 20.2103
10 CFR 20.2108
10 CFR 20.2003

Labeling containers.
General requirements.
Records of surveys.
Records of waste disposal.
Disposal by release into sanitary sewerage.

B. Effluents

1. General

Inspection Procedure
(IP) 87102

"Maintaining Effluents from Materials
Facilities As Low As Is Reasonably
Achievable (ALARA)."

2. Release to septic tanks

10 CFR 20.1003
10 CFR Part 20,
App. B, Table 2

Definitions (sanitary sewerage).
Effluent Concentrations.

3. Incineration of waste

10 CFR 20.2004

Treatment or disposal by incineration.

4. Control of air effluents and ashes

10 CFR 20.1201
10 CFR 20.1301

Occupational dose limits for adults.
Dose limits for individual members of

10 CFR 20.1501	the public.
10 CFR 20.1701	General.
	Use of process or other engineering controls.
Applicable license conditions	

C. Waste Management

1. General

10 CFR 20.2001	General requirements.
Information Notice (IN) 90-09	Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees.
IP 84850	Radioactive Waste Management - Inspection of Waste Generator Requirements of 10 CFR Part 20 and 10 CFR Part 61.

2. Waste compacted

Applicable license conditions.

3. Waste storage areas

10 CFR 20.1801	Security of stored material.
10 CFR 20.1902	Posting requirements.
10 CFR 20.1904	Labeling containers.
Applicable license conditions.	

4. Packaging, Control, and Tracking

10 CFR Part 20, Appendix F	Requirements for Low-Level Waste Transfer for Disposal at Land Disposal Facilities and Manifests.
10 CFR 20.2006	Transfer for disposal and manifests.
10 CFR 61.55	Waste classification.
10 CFR 61.56	Waste characteristics.

5. Transfer

10 CFR Part 20, Appendix F	Requirements for Low-Level Waste Transfer for Disposal at Land Disposal Facilities and Manifests.
10 CFR 20.2001	General requirements.
10 CFR 20.2006	Transfer for disposal and manifests.

6. Records

10 CFR 20.2103
10 CFR 20.2108

Records of surveys.
Records of waste disposal.

10. DECOMMISSIONING

10 CFR 30.35	Financial assurance and recordkeeping for Decommissioning.
10 CFR 30.36	Expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas.
Inspection Manual Chapter (IMC) 3602 IP 87104	“Decommissioning Inspection Program for Fuel Cycle Facilities and Materials Licensees.” “Decommissioning Inspection Procedure for Materials Licensees.”
IMC 2605	“Decommissioning Procedures for Fuel Cycle and Materials Licensees.”
NUREG/BR-0241	“NMSS Handbook for Decommissioning Fuel Cycle and Materials Licensees.”

11. TRANSPORTATION

A. General

NRC Charts	“Hazard Communication for Class 7 (Radioactive) Materials.”
10 CFR 71.5	Transportation of licensed material.
Temporary instruction 2515/133	Implementation of Revised 49 CFR Parts 100-179 and 10 CFR Part 71.

B. Shippers - Requirements for Shipments and Packaging

1. General Requirements

49 CFR Part 173, Subpart I	Class 7 (radioactive) materials.
49 CFR 173.24	General requirements for packagings and packages.
49 CFR 173.448	General transportation requirements.
49 CFR 173.435	Table of A ₁ and A ₂ values for radionuclides.

2. Transport Quantities

10 CFR 71.4	Definitions.
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a. All quantities

10 CFR 71.4	Definitions.
49 CFR 173.410	General design requirements.
49 CFR 173.441	Radiation level limitations.
49 CFR 173.443	Contamination control.
49 CFR 173.475	Quality control requirements prior to each shipment of Class 7 (radioactive) materials.

- 49 CFR 173.476 Approval of special form Class 7 (radioactive) materials.
- b. Limited quantities
 - 49 CFR 173.421 Excepted packages for limited quantities of Class 7 (radioactive) materials.
 - 49 CFR 173.422 Additional requirements for excepted packages containing Class 7 (radioactive) materials.
- c. Type A quantities
 - 49 CFR 173.412 Additional design requirements for Type A packages.
 - 49 CFR 173.415 Authorized Type A packages.
 - 49 CFR 178.350 Specification 7A; general packaging, Type A.
- d. Type B quantities
 - IP 86740, Section 2 Inspection of Transportation activities.
- e. LSA material and SCO
 - 49 CFR 173.403 Definitions.
 - 49 CFR 173.427 Transport requirements for low specific activity (LSA) Class 7 (radioactive) materials and surface contaminated objects (SCO).

3. HAZMAT Communication Requirements

- 49 CFR 172.200-205 Shipping papers.
- 49 CFR 172.300-338 Marking.
- 49 CFR 172.400-450 Labeling.
- 49 CFR 172.500-560 Placarding.
- 49 CFR 172.600-604 Emergency response information.

C. HAZMAT Training

- 49 CFR 172.702 Applicability and responsibility for training and testing.
- 49 CFR 172.704 Training requirements.

D. Transportation by Public Highway

- 49 CFR 171.15 Immediate notice of certain hazardous materials incidents.
- 49 CFR 171.16 Detailed hazardous materials incident reports.
- 49 CFR 177.800 Purpose and scope of this part and responsibility for compliance and training.

49 CFR 177.816
49 CFR 177.842

Driver training.
Class 7 (radioactive) material.

12. NOTIFICATIONS AND REPORTS

10 CFR 19.13	Notifications and reports to individuals.
10 CFR 20.2201	Reports of theft or loss of licensed material.
10 CFR 20.2202	Notification of incidents.
10 CFR 20.2203	Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits.
10 CFR 30.50	Reporting requirements.

13. POSTING AND LABELING

10 CFR 19.11	Posting of notices to workers.
10 CFR 21.6	Posting requirements.
10 CFR 20.1902	Posting requirements.
10 CFR 20.1903	Exemptions to posting requirements.
10 CFR 20.1904	Labeling containers.
10 CFR 20.1905	Exemptions to labeling requirements.

14. INDEPENDENT AND CONFIRMATORY MEASUREMENTS

No references.

15. VIOLATIONS, NON-CITED VIOLATIONS, AND OTHER SAFETY ISSUES

NUREG/BR-0195, Rev. 1	"NRC Enforcement Manual."
NUREG-1600, Rev. 1	"General Statement of Policy and Procedures for NRC Enforcement Actions."

16. PERSONNEL CONTACTED

No references.

17. PERFORMANCE EVALUATION FACTORS

IP 87101	Performance Evaluation Factors.
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18. SPECIAL CONDITIONS OR ISSUES

IN 96-70	"Year 2000 Effect on Computer System Software."
IN 97-61	"U.S. Department of Health and Human Services Letter to Medical Device Manufacturers, on the Year 2000 Problem."

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