

Environmental



Guidance



RCRA Permitting Guide
for
Hazardous & Radioactive Mixed Waste
Management Facilities

April 1997

U.S. Department of Energy
Office of Environmental Policy & Assistance
RCRA/CERCLA Division, EH-413
Washington, D.C.

**RCRA
Permitting Guide for DOE
Hazardous and Radioactive Mixed
Waste Facilities**

April 1997



Prepared by

**U.S. Department of Energy
Office of Environmental Policy and Assistance
RCRA/CERCLA Division
(EH-413)
Washington, D.C.**

Technical Support by

**Halliburton NUS Corporation
and
Argonne National Laboratory**

Note to the Reader

This guidance is based primarily on the Federal regulations concerning permitting under the Resource Conservation and Recovery Act (RCRA located in Title 40 of the Code of Federal Regulations (40 CFR), parts 124, 264, 266, 268 and 270. As indicated throughout the document, some information has also been extracted from other sources. These sources include U.S. Environmental Protection Agency (EPA) guidance documents, Office of Solid Waste and Emergency Response (OSWER) Directives, *Federal Register* notices, and memoranda. These sources are referenced or identified as supplemental information at the end of each chapter. Many are available from the U.S. Department of Commerce, National Technical Information Service (NTIS). NTIS ordering information is as follows:

Telephone Orders

For telephone orders, call (703) 487-4650 between 8:30 am and 5:00 pm (Eastern Time). For the hearing impaired, call TDD (703) 487-4639.

FAX Orders

For FAX orders, the number is (703) 321-8547. To verify receipt of FAX orders, call (703) 487-4679.

E-mail Orders

Order through the Internet 24 hours a day: orders@ntis.fedworld.gov

On-Line Orders via FedWorld®

Connect to FedWorld® by modem as follows:

Set modem parity to none, data bits to 8 and stop bit to 1. Set terminal emulation to ANSI. Set duplex to full. Then set communications software to dial FedWorld® at (703) 321-3339.

OR

Connect to FedWorld® by Internet as follows:

Telnet to fedworld.gov. For Internet File Transfer Protocol (FTP) services, connect to [ftp.fedworld.gov](ftp://fedworld.gov). For World Wide Web services, point your browser to open the URL <http://www.fedworld.gov>.

On-Line Orders via Vendors

Through DIALOG, ORBIT, OCLC, AND STN, you can order NTIS products on-line. Direct inquiries to:

DIALOG at (800) 334-2564
ORBIT at (800) 456-7248, in Virginia (703) 442-0900
OCLC at (800) 848-5800, in Ohio (800) 848-8286
STN International at (800) 848-6533, in Ohio (800) 848-6538.

Mail Orders

Send mail orders to:

NTIS
5285 Port Royal Road
Springfield, VA 22161

Please DO NOT mail *RUSH* orders.

ACKNOWLEDGEMENTS

This document was developed by the Department of Energy Office of Environmental Policy and Assistance (EH-41) within the Office of Environment, Safety, and Health. Technical support was provided by Argonne National Laboratory and Halliburton NUS Corporation.

EH-41 wishes to acknowledge the significant contribution to the development of this document made by the following Department of Energy and Environmental Protection Agency personnel whose organizations conducted a critical review and provided many vital improvements:

Paul Cote	Albuquerque Operations Office
Ronald Dodds	Albuquerque Operations Office
Leonard Trujillo	Albuquerque Operations Office
Jhon Carilli	Nevada Operations Office
Gene Turner	Savannah River Operations Office
Susan Jones	Office of Technical Services (EM-37) Office of Deputy Assistant Secretary for Waste Management
Carolyn Osborne	Waste Activities Division (EH-421) Office of NEPA Policy & Assistance
Hancy Hunt	Office of Solid Waste Federal, State, and Tribal Programs U. S. Environmental Protection Agency
James Michael	Office of Solid Waste State Programs and Permits Branch U. S. Environmental Protection Agency
Wayne Roepe	Office of Solid Waste State Programs and Permits Branch U. S. Environmental Protection Agency

Table of Contents

Introduction

Purpose	Introduction-1
Background	Introduction-1
Radioactive Mixed Wastes	Introduction-1
Regulatory Framework	Introduction-2
Scope of This Guidance Document	Introduction-6
RCRA Permitting Activity at DOE Facilities	Introduction-9
Overview of Chapters and Modules	Introduction-9
Chapter 1: Interim Status	Introduction-9
Chapter 2: RCRA Permit Application	Introduction-10
Chapter 3: Managing RCRA Permitting	Introduction-11
Chapter 4: RCRA Permit Modification	Introduction-12
Chapter 5: Special Forms of Permits	Introduction-12
Chapter 6: Federal/State Authority and Implementation	Introduction-13
Chapter 7: Integration with Other Laws	Introduction-13
References	Introduction-14

Chapter 1 -- Interim Status

Key to the Graphic Approach	1-i
INTRODUCTION	1-1
MODULE 1-1: <u>Eligibility for Interim Status</u>	1-5
MODULE 1-2: <u>Part B Permit Application Deadlines and Loss of Interim Status (LOIS)</u>	1-13
MODULE 1-3: <u>Changes During Interim Status</u>	1-19
REFERENCES	1-23
CHAPTER 1 INDEX	1-25

Chapter 2 -- RCRA Permit Application

INTRODUCTION	2-1
MODULE 2-1: <u>Permit Application Deadlines for New Facilities</u>	2-4

MODULE 2-2:	<u>Information Required in a RCRA Permit Application</u>	2-7
Submodule 2-2-1:	COMPLETING THE PART A PERMIT	2-9
Submodule 2-2-2:	COMPLETING THE PART B PERMIT APPLICATION	2-15
Submodule 2-2-2-1:	FACILITY DESCRIPTION	2-18
Submodule 2-2-2-2:	WASTE CHARACTERIZATION	2-25
Submodule 2-2-2-3:	PROCESS INFORMATION	2-29
Submodule 2-2-2-4:	GROUNDWATER MONITORING	2-74
Submodule 2-2-2-5:	PROCEDURES TO PREVENT HAZARDS	2-79
Submodule 2-2-2-6:	CONTINGENCY PLAN	2-88
Submodule 2-2-2-7:	PERSONNEL TRAINING	2-88
Submodule 2-2-2-8:	CLOSURE AND POST-CLOSURE PLANS	2-93
Submodule 2-2-2-9:	CORRECTIVE ACTION	2-98
Submodule 2-2-2-10:	PUBLIC PARTICIPATION	2-98
Submodule 2-2-2-11:	PART B CERTIFICATION	2-99
MODULE 2-3:	<u>Waste Minimization and Exposure Assessment</u>	2-100
Submodule 2-3-1:	WASTE MINIMIZATION	2-100
Submodule 2-3-2:	EXPOSURE ASSESSMENT	2-100
MODULE 2-4:	<u>Reapplication</u>	2-102
Submodule 2-4-1:	DURATION OF RCRA PERMITS	2-102
Submodule 2-4-2:	CONTENTS OF A RENEWAL APPLICATION	2-102
Submodule 2-4-3:	REAPPLICATION DEADLINE	2-103
Submodule 2-4-4:	CONTINUATION OF EXPIRING PERMITS	2-103
MODULE 2-5:	<u>Submitting RCRA Permit Applications or Renewal Applications</u>	2-105
REFERENCES		2-106
CHAPTER 2 INDEX		2-110
Chapter 3 -- Managing RCRA Permitting		
INTRODUCTION		3-1
MODULE 3-1:	<u>Planning for RCRA Permitting</u>	3-3
Submodule 3-1-1:	DOES THE TSD UNIT REQUIRE A RCRA PERMIT?	3-4
Submodule 3-1-2:	DOES THE UNIT REQUIRE PERMITS UNDER	

STATUTORY AUTHORITIES OTHER THAN RCRA?	3-4
CLEAN AIR ACT	3-5
Clean Air Act, Title V Operating Permits	3-6
Clean Air Act, Prevention of Significant Deterioration	3-7
Clean Air Act, Nonattainment Areas	3-8
Clean Air Act, Summary	3-9
CLEAN WATER ACT	3-10
Clean Water Act, Section 402, National Pollutant Discharge Elimination System ..	3-10
Clean Water Act, Section 404, Dredge and Fill	3-13
ATOMIC ENERGY ACT OF 1954	3-13
STATE LAWS	3-15
Submodule 3-1-3: WHAT OTHER FEDERAL PROGRAMS THAT DO NOT REQUIRE PERMITS CAN AFFECT RCRA PERMITTING?	3-15
WILD AND SCENIC RIVERS ACT	3-16
NATIONAL HISTORIC PRESERVATION ACT	3-17
ENDANGERED SPECIES ACT	3-19
COASTAL ZONE MANAGEMENT ACT	3-20
FISH AND WILDLIFE COORDINATION ACT	3-22
Submodule 3-1-4: WHAT REVIEW DOES THE NATIONAL ENVIRONMENTAL POLICY ACT REQUIRE?	3-23
Submodule 3-1-5: WHAT PUBLIC PARTICIPATION IS NEEDED?	3-24
MODULE 3-2: <u>RCRA Permit Application Processing</u>	3-29
Submodule 3-2-1: RCRA PERMIT APPLICATION PROCESSING	3-29
Submodule 3-2-2: CONSOLIDATION OF PERMIT APPLICATION PROCESSING	3-36
MODULE 3-3: <u>Draft RCRA Permits</u>	3-38
Submodule 3-3-1: CONTENT AND SUPPORT FOR DRAFT RCRA PERMIT	3-38
Submodule 3-3-2: CAN DOE AFFECT DRAFT PERMIT CONTENT? ..	3-41
Submodule 3-3-3: PUBLIC COMMENTS	3-43
Submodule 3-3-4: PUBLIC HEARINGS	3-44
Submodule 3-3-5: REOPENING PUBLIC COMMENT	3-46
Submodule 3-3-6: PERMIT DECISION APPEALS	3-47
MODULE 3-4: <u>Duration and Termination of RCRA Permits</u>	3-51
Submodule 3-4-1: RCRA PERMIT COMPLIANCE REQUIREMENTS ..	3-51
Submodule 3-4-2: RCRA PERMIT TERMINATION	3-52
REFERENCES	3-55

CHAPTER 3 INDEX 3-59

Chapter 4 -- RCRA Permit Modification

INTRODUCTION 4-1

MODULE 4-1: Modifications Initiated by DOE 4-3

 Submodule 4-1-1: CLASS 1 MODIFICATIONS 4-3

 Submodule 4-1-2: CLASS 2 MODIFICATIONS 4-12

 Submodule 4-1-3: CLASS 3 MODIFICATIONS 4-21

 Submodule 4-1-4: OTHER MODIFICATIONS AND TEMPORARY
 AUTHORIZATIONS NOT REQUIRING PRIOR PUBLIC
 NOTICE AND COMMENT 4-26

MODULE 4-2: Modifications/Terminations Initiated by the Regulator 4-30

REFERENCES 4-33

CHAPTER 4 INDEX 4-35

Chapter 5 -- Special Forms of Permits

INTRODUCTION 5-1

MODULE 5-1: Emergency Permits 5-3

MODULE 5-2: Research, Development, and Demonstration
(RD&D) Permits 5-6

MODULE 5-3: Post-Closure Permits 5-8

REFERENCES 5-13

CHAPTER 5 INDEX 5-15

Chapter 6 -- Federal/State Authority and Implementation

INTRODUCTION 6-1

MODULE 6-1: The Structure of State Authorization 6-1

MODULE 6-2: RCRA Permitting in Authorized States 6-5

REFERENCES	6-9
CHAPTER 6 INDEX	6-11
Chapter 7 -- Integration with Other Laws	
INTRODUCTION	7-1
MODULE 7-1: <u>Other Federal Laws</u>	7-2
Submodule 7-1-1: ATOMIC ENERGY ACT	7-2
Submodule 7-1-2: ARCHEOLOGICAL AND HISTORIC PRESERVATION ACT	7-9
Submodule 7-1-3: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT	7-10
Submodule 7-1-4: TOXIC SUBSTANCES CONTROL ACT (TSCA)	7-13
MODULE 7-2: <u>Executive Orders</u>	7-14
REFERENCES	7-17
CHAPTER 7 INDEX	7-21

Index

Appendices

Appendix I:	RCRA Part A Permit Application Form (EPA Form 8700-23)
Appendix II:	EPA Headquarters' RCRA Part B Permit Application Completeness Review Checklist
Appendix III:	Base RCRA and Mixed Waste Authorization Status of States
Appendix IV:	RCRA §3010 Notification of Regulated Waste Activity Form (EPA Form 8700-12)

[This Page Intentionally Blank]

List of Abbreviations and Acronyms

AEA	Atomic Energy Act of 1954, P.L. 83-703, as amended
ALARA	as low as reasonably achievable
ARARs	applicable or relevant and appropriate requirements
BIFs	boilers and industrial furnaces
BTU	British thermal unit(s)
CAA	Clean Air Act, P.L. 90-148, as amended
CAMU	corrective action management unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, P.L. 96-510, as amended
CESQG	conditionally exempt small quantity generator
CFR	Code of Federal Regulations
CWA	Clean Water Act, as amended by the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
E.O.	Executive Order
EA	Environmental Assessment
EIS	Environmental Impact Statement
EM	U.S. Department of Energy, Office of Environmental Management
EMP	Environmental Monitoring Plan
EMS	Emergency Management System
EPA	U.S. Environmental Protection Agency
ERPP	Environmental Radiological Protection Program
ES&H	Environment, Safety and Health
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FOTWs	federally owned treatment works
FR	Federal Register
HAP	hazardous air pollutant
HSWA	Hazardous and Solid Waste Amendments, P.L. 98-616
HWM	hazardous waste management
ID	identification
LDR	Land Disposal Restrictions

LOIS	loss of interim status
M&O	maintenance and operating
MOA	Memorandum of Agreement
NARM	naturally occurring and accelerator-produced radioactive material
NCP	National Contingency Plan
NEPA	National Environmental Policy Act, P.L. 91-190, as amended
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NMFS	National Marine Fisheries Service
NOD	Notice of Deficiency
NORM	naturally occurring radioactive material
NPS	National Park Service
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRC	U.S. Nuclear Regulatory Commission
OB/OD	open burning/open detonation
OMB	Office of Management and Budget
P.L.	Public Law
PCBs	polychlorinated biphenyls
POHCs	principal organic hazardous constituents
POTW	publicly owned treatment works
PSD	Prevention of Significant Deterioration
QA	quality assurance
RCRA	Resource Conservation and Recovery Act, P.L. 94-580, as amended
RD&D	research, development and demonstration
RI/FS	remedial investigation/feasibility study
RMW	radioactive mixed waste
ROD	Record of Decision
SAR	Safety Analysis Report
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SEN	Secretary of Energy Notice
SHPO	State Historic Preservation Officer
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SOPs	standard operating procedures
SPCC	spill prevention control and countermeasures

SSAB	site-specific advisory board
SWMU	solid waste management unit
TSCA	Toxic Substances Control Act, P.L. 94-469, as amended
TSD	treatment, storage, or disposal
TSDf	treatment, storage, or disposal facility
U.S.C.	United States Code
UEC	Uranium Enrichment Corporation
UIC	underground injection control
USFWS	U.S. Fish and Wildlife Service

[This Page Intentionally Blank]

Introduction

Purpose	Introduction-1
Background	Introduction-1
Radioactive Mixed Wastes	Introduction-1
Regulatory Framework	Introduction-2
Scope of This Guidance Document	Introduction-6
RCRA Permitting Activity at DOE Facilities	Introduction-9
Overview of Chapters and Modules	Introduction-9
Chapter 1: Interim Status	Introduction-9
Chapter 2: RCRA Permit Application	Introduction-10
Chapter 3: Managing RCRA Permitting	Introduction-11
Chapter 4: RCRA Permit Modification	Introduction-12
Chapter 5: Special Forms of Permits	Introduction-12
Chapter 6: Federal/State Authority and Implementation	Introduction-13
Chapter 7: Integration with Other Laws	Introduction-13
References	Introduction-14
Statutes	Introduction-14
Regulations	Introduction-14
Federal Register	Introduction-14
Other Publications	Introduction-15

[This Page Intentionally Blank]

INTRODUCTION

Purpose

The purpose of this guidance document is to assist the U.S. Department of Energy (DOE) and contractor personnel in identifying waste management units that are required by the Resource Conservation and Recovery Act (RCRA) to obtain hazardous waste treatment, storage, or disposal permits. Further, this guidance is intended to provide information on and instructions for preparing RCRA permit applications, negotiating RCRA permits with regulatory agencies, modifying RCRA permits, and complying with RCRA permit terms and conditions. As such, the guidance depends heavily on regulations promulgated by the U.S. Environmental Protection Agency (EPA). Because EPA's regulations are frequently modified and supplemented, this guidance is not intended as a substitute for those regulations. Rather, it should be used as a resource for locating and interpreting applicable Federal regulations. DOE personnel responsible for RCRA permitting in States that have been authorized to implement the RCRA hazardous waste permitting program may use this guidance as a source of RCRA program information, but will need to consult applicable State regulations before preparing RCRA permit applications. The guidance focuses on waste management unit types used by DOE to manage hazardous and radioactive mixed waste (RMW).

Background

This section of the Introduction describes the regulatory framework in which permits are issued under RCRA and the scope of this guidance document in relation to this regulatory framework. It also provides a brief explanation of some of the factors that are expected to influence RCRA permitting activity throughout the DOE complex over the next several years.

Radioactive Mixed Wastes



Radioactive mixed wastes (RMW) are wastes that contain both a hazardous waste component regulated under Subtitle C of RCRA and a radioactive component consisting of source, special nuclear, or byproduct material regulated under the Atomic Energy Act (AEA) [RCRA §1004(41)]. EPA clarified on July 3, 1986 (51 FR 24504), that RCRA applies to wastes that contain both types of components and required States to petition for authorization to regulate RMW. Nevertheless, some confusion still existed as to the scope of wastes that constituted mixed wastes, and the July 3, 1986, notice stated that pending an interpretation of the “byproduct definition” by DOE, RMW would be regulated on a case-by-case basis. On May 1, 1987, DOE published the “Byproduct Material” rule, which clarified that for the purpose of determining the

applicability of RCRA to DOE radioactive waste, only the actual radionuclides suspended in the waste substance would fall within the definition of “byproduct material” as stated in the AEA §11(e)(1). Therefore, only the actual radionuclides in the waste substance are exempt from RCRA pursuant to RCRA §1004(41). The nonradioactive hazardous component of the waste substance is not exempt from regulation under RCRA (10 CFR 962.3).

The promulgated language of the “Byproduct Material” rule interprets only RCRA’s exemption of byproduct material from regulation as solid waste. It does not address RCRA’s similar exemptions of source material and special nuclear material. Notwithstanding, DOE’s preamble to the “Byproduct Material” rule implies that if mixed wastes contain radionuclides meeting the definition of source material or special nuclear material, again, only the radionuclides should be exempt from RCRA regulation [52 FR 15937 (May 1, 1987)]. Based on this interpretation, all RCRA implementing regulations applicable to hazardous wastes should be applied equally to RMW generated by DOE. Nevertheless, because of the nature of RMW, some special concerns should be addressed during permitting of treatment, storage, and disposal facilities that will manage RMW. Hence, throughout this guidance document, discussions important to RMW are marked with the symbol of the atom [⚗].

Some DOE facilities seeking RCRA treatment, storage, or disposal (TSD) permits may manage hazardous wastes that are radioactive, but that do not contain radionuclides defined by the AEA as source material, special nuclear material, or byproduct material. Instead, the radionuclides may be naturally occurring radioactive materials (NORM) or naturally occurring and accelerator-produced radioactive materials (NARM). Such radioactive hazardous wastes do not fall within the definition of RMW. Also, RCRA §1004(41) does not exempt the radionuclides contained in them from RCRA regulation. Nevertheless, many of the same special concerns apply to both RMW and NORM/NARM-containing hazardous wastes. Therefore, DOE personnel responsible for RCRA permitting should consider discussions marked with the atom symbol in this guidance document to apply equally to RMW and hazardous wastes containing NORM/NARM.

Regulatory Framework

Unless excluded by the implementing regulations, owners/operators of facilities that treat, store, or dispose of hazardous or RMW regulated under RCRA Subtitle C, “Hazardous Waste Management,” must have permits. Facilities in existence on the effective date of statutory or regulatory changes subjecting them to RCRA permitting requirements may operate under “interim status” until permits are issued or denied. New facilities (or new units at existing facilities) that manage hazardous or RMW, however, must apply for and obtain RCRA permits before construction begins [40 CFR 270.10(f)(1)].

The regulatory agency responsible for issuing a RCRA permit to any particular hazardous or RMW treatment, storage, or disposal facility will depend on the geographic location of the facility. In accordance with the original RCRA legislation, the EPA has authorized many States to implement the base RCRA Subtitle C program within their boundaries entirely in lieu of the Federal program. In these authorized States, the State issues base RCRA permits. However, States with base RCRA authorization often have not yet been authorized to implement RCRA programs created by the Hazardous and Solid Waste Amendments of 1984 (HSWA) (e.g., corrective action, land disposal restrictions). Therefore, even in authorized States, the appropriate EPA Regional Office may issue portions of RCRA permits covering HSWA programs for which the State is not authorized. In these circumstances, permit applications are usually filed with the responsible State agency, which then coordinates the overall permitting process in accordance with a State/EPA Memorandum of Agreement (MOA). In States having no RCRA authorizations, permit applications must be filed with the responsible EPA Regional Office, which issues the entire RCRA permit.

The EPA hazardous waste management regulations set baseline standards that authorized State programs must at least match. Authorized States may also (and often do) adopt more stringent regulations (i.e., regulations that place stricter requirements on the regulated community), or regulations broader in scope (i.e., regulations that increase the size of the regulated community) than the Federal program. In any event, an authorized State has primary enforcement responsibility within its boundaries for its entire program. With one exception, EPA can also enforce RCRA requirements in an authorized State. The exception is that when a State program is broader in scope than the Federal baseline program, EPA cannot enforce the additional coverage because it is not part of the Federal program [40 CFR 271.19(e)].

Hazardous wastes subject to RCRA jurisdiction are defined in 40 CFR part 261, "Identification and Listing of Hazardous Waste." Standards applicable to generators of these wastes are specified in 40 CFR part 262. Standards applicable to owners/operators of facilities that manage these wastes are listed in 40 CFR part 265 for interim status facilities that have not yet received RCRA permits and in 40 CFR part 264 for permitted facilities. These regulations contain general facility standards applicable to all facilities that manage hazardous and RMW, and unit-specific standards applicable to specific types of treatment, storage, or disposal (TSD) units.

The 40 CFR part 264 regulations, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities," serve as the primary basis for RCRA permit provisions. For interim status facilities, compliance data developed in the course of operating under the 40 CFR part 265 requirements, "Interim Status Standards for the Owners of Hazardous Waste Treatment, Storage, and Disposal Facilities," are also used in the development of the facility's permit. It is through the

permit application and negotiation process that appropriate 40 CFR part 264 regulatory requirements are applied to individual facilities.

In 1984, HSWA modified RCRA to mandate that provisions be incorporated into RCRA permits to institute corrective action for releases of hazardous wastes or hazardous constituents from solid waste management units (SWMUs). EPA codified this requirement in 40 CFR 264.101, Corrective Action for Solid Waste Management Units. Additionally, EPA announced plans to enact a comprehensive corrective action regulatory program in 40 CFR part 264, subpart S [55 FR 30798 (July 27, 1990) and 61 FR 19432 (May 1, 1996)]. Thus far, however, only regulations providing for corrective action management units (CAMUs) (40 CFR 264.552) and temporary units (40 CFR 264.553) have been promulgated in subpart S. EPA's Semiannual Regulatory Agenda issued in November 1996 indicates that finalization of all subpart S regulations is scheduled to occur by December 1998 [61 FR 62153 (November 29, 1996)].

HSWA also prohibits disposal of RCRA hazardous wastes in or on the land, unless the wastes are first treated to meet standards that EPA was required to promulgate. These treatment standards, called Land Disposal Restrictions (LDRs), are given in 40 CFR part 268, "Land Disposal Restrictions," and affect RCRA permit provisions governing waste treatment, storage and disposal practices.

Regulations dictating specific information that must be submitted to EPA or an authorized State in RCRA permit applications are located in 40 CFR part 270, "EPA Administered Permit Programs: The Hazardous Waste Permit Program." These regulations also address the qualification requirements for obtaining interim status, the circumstances that terminate interim status, permit conditions, permit modifications, permit duration, and special forms of permits. Special forms of permits include permits by rule; emergency permits; trial burn permits for incinerators and boilers and industrial furnaces; permits for land treatment demonstrations using field test or laboratory analyses; interim permits for underground injection control wells; and research, development and demonstration permits.

The Federal administrative process by which permits are issued, modified, and revoked and reissued is governed by regulations in 40 CFR part 124 "Procedures for Decisionmaking." For RCRA permits, the process involves the following:

- Convening of at least one meeting with the public by the applicant before submitting a permit application (40 CFR 124.31);
- Issuance of public notice by the responsible regulatory agency when an application has been filed for an initial permit or renewal of an existing permit (40 CFR 124.32);

- Assessment by the responsible regulatory agency of the need for an information repository (40 CFR 124.33);
- Review of the permit application by the responsible regulatory agency (40 CFR 124.3);
- Preparation of the draft permit by the responsible regulatory agency [40 CFR 124.6(a)];
- Issuance of public notice by the responsible regulatory agency of opportunity for comment and public hearing on the draft permit (40 CFR 124.10);
- Convening of a public hearing by the responsible regulatory agency, if warranted (40 CFR 124.12); and
- Finalization of the permit by the responsible regulatory agency (40 CFR 124.17).

Other Federal laws that may affect the RCRA permitting process include the following:

- Wild and Scenic Rivers Act,
- National Historic Preservation Act of 1966,
- Endangered Species Act,
- Coastal Zone Management Act,
- Fish and Wildlife Coordination Act,
- Archeological and Historic Preservation Act,
- Clean Air Act,
- Clean Water Act,
- Toxic Substances Control Act,
- Atomic Energy Act, and
- Comprehensive Environmental Response, Compensation, and Liability Act.

For DOE facilities, the RCRA permitting process may also be affected by the National Environmental Policy Act, Executive Orders, and DOE Orders.

Scope of This Guidance Document

This guidance document provides an overview of the Federal RCRA permitting program. Consequently, it will almost always be necessary for users of this document to supplement the baseline information presented here with information relevant to regulatory requirements in the State in which the facility being permitted is located. In addition, EPA has published a number of guidance documents applicable to RCRA permitting. The “References” section at the end of each chapter in this report contains citations to these and other documents that could provide useful information relevant to the RCRA permitting process.

This document focuses on information that is applicable to DOE. For example, there are specific RCRA permit application requirements for containers, tank systems, surface impoundments, waste piles, incinerators, land treatment facilities, landfills, boilers and industrial furnaces, miscellaneous units, process vents, equipment, drip pads, and containment buildings. However, this document does not address those requirements applicable to units that are not used by DOE to manage hazardous or RMW. Thus, this document does not address specific requirements applicable to waste piles, land treatment facilities, or drip pads.

The RCRA regulations exempt certain types of TSD units or facilities that could be used by DOE for managing RMW and hazardous wastes from the requirement to obtain a RCRA permit. This guidance document identifies such exempt units and facilities, but does not provide additional information about them, or address other RCRA regulatory requirements that may apply to them. For information about such requirements when storage of RMW is involved, DOE personnel responsible for RCRA permitting should consult the “Joint NRC/EPA Guidance on the Storage of Mixed Low-Level Radioactive and Hazardous Waste, Draft for Comment,” [60 FR 40204 (August 7, 1995)]. Additionally, DOE personnel should be aware that, in spite of the exemption, LDR treatment standards promulgated by EPA pursuant to HSWA (40 CFR part 268) may apply to the contents of RMW and hazardous waste TSD units that are exempt from RCRA permitting requirements. Exempt TSD units and facilities are briefly described below. Each description contains a regulatory citation for the exemption.

- Storage units where generators accumulate waste on-site for less than 90 days are not required to have RCRA permits as long as the units are in compliance with the applicable requirements of 40 CFR 262.34 [40 CFR 270.1(c)(2)(i)].
- Storage units in which a generator of greater than 100 kilograms but less than 1,000 kilograms of hazardous waste in a calendar month accumulates such

waste on-site for 180 days or less (270 days or less if off-site transport for treatment and disposal must exceed 200 miles) are not required to have RCRA permits provided that: the quantity of accumulated waste never exceeds 6,000 kilograms; the accumulation units comply with applicable interim status standards for containers or tanks in 40 CFR part 265, subparts I and J, respectively; the date accumulation began and the words “hazardous waste” are marked on the accumulation tank or container; the generator complies with interim status standards in 40 CFR part 265 for preparedness; the generator complies with the requirement for a waste analysis plan in 40 CFR 268.7(a)(4); and the generator meets all other requirements listed in 40 CFR 262.34(d)(5) [40 CFR 262.34(d) and (e)].

- Containers at or near the point of generation in which generators accumulate less than 55 gallons of hazardous waste, or less than one quart of acutely hazardous waste, are not required to have RCRA permits as long as: the containers are under the control of the operator of the waste-generating process; the containers are in compliance with certain requirements for interim status container use; and the generator is in compliance with 40 CFR 262.34(c)(1)(ii) and 262.34(c)(2) [40 CFR 262.34(c)].
- Facilities operated solely for the purpose of treating, storing, or disposing of hazardous waste that is excluded from regulation under 40 CFR 261.4 do not need a RCRA permit [40 CFR 270.1(c)(2)(iii)]. Wastes excluded from regulation by 40 CFR 261.4 include:
 - Certain materials that are excluded from the definition of solid waste [40 CFR 261.4(a)];
 - Certain solid wastes that are excluded from the definition of hazardous waste [40 CFR 261.4(b)];
 - Hazardous wastes generated in certain tanks, vessels, pipelines, and manufacturing units, until the wastes exit the unit in which they are generated, provided that the waste exits the unit within 90 days after the unit ceases operation, and provided that the unit is not a surface impoundment [40 CFR 261.4(c)];
 - Solid waste and media samples collected for the purpose of testing [40 CFR 261.4(d)];
 - Certain hazardous waste samples generated and collected for the purpose of conducting treatability studies [40 CFR 261.4(e)]; and
 - Certain hazardous waste samples undergoing treatability studies [40 CFR 261.4(f)].
- Facilities permitted, licensed, or registered by a State to manage municipal solid waste or non-municipal non-hazardous solid waste do not need RCRA permits

to manage hazardous or RMW if the only hazardous or RMW that the facility treats, stores, or disposes of originates from conditionally exempt small quantity generators (CESQGs) as defined in 40 CFR 261.5, and the facility complies with all applicable conditions on exemption [40 CFR 270.1(c)(2)(iii)].

- Totally enclosed treatment facilities as defined by 40 CFR 260.10 are not required to obtain RCRA permits [40 CFR 270.1(c)(2)(iv)]. Such facilities include facilities for the treatment of hazardous waste or RMW that are directly connected to industrial production processes and that are constructed and operated in a manner that prevents the release of any hazardous waste, or any constituent thereof, into the environment during treatment (40 CFR 260.10).
- Wastewater treatment units meeting the definition of a wastewater treatment unit in 40 CFR 260.10 are exempt from RCRA permit requirements [40 CFR 270.1(c)(2)(v)].
- Elementary neutralization units (devices used for neutralizing wastes that are hazardous only because they exhibit the characteristic of corrosivity, or because they were listed for exhibiting the characteristic of corrosivity) are exempt from RCRA permit requirements [40 CFR 270.1(c)(2)(v)].
- Transfer facilities where transporters store manifested shipments of hazardous waste or RMW in containers meeting the requirements of 40 CFR 264.30 at a transfer facility for a period of ten days or less are exempt from RCRA permit requirements [40 CFR 270.1(c)(2)(vi)].
- Operations that involve adding absorbent material to waste in a container or adding waste to absorbent material in a container (provided that these actions occur when the waste is first placed in the container) are exempt from RCRA permit requirements, as long as such operations comply with the requirements of 40 CFR 264.17(b), 264.171, and 264.172 [40 CFR 270.1(c)(2)(vii)].
- Universal waste handlers and universal waste transporters who are regulated under 40 CFR part 273, "Standards for Universal Waste Management," and who manage (1) batteries as described in 40 CFR 273.2, (2) pesticides as described in 40 CFR 273.3, and (3) thermostats as described in 40 CFR 273.4 are not required to obtain RCRA permits [40 CFR 270.1(c)(2)(viii)].
- Treatment or containment activities do not require a RCRA permit when taken in immediate response to: a discharge of hazardous waste or RMW, an imminent and substantial threat of a discharge of hazardous or RMW, or discharge of a material which, when discharged, becomes a hazardous or

RMW. Treatment activities that continue after the immediate response is over, however, do require a RCRA permit [40 CFR 270.1(c)(3)].

- Some hazardous waste and RMW recycling processes (e.g., the blending of reclaimed solvents) do not require a RCRA permit. The storage of RCRA hazardous materials before they are recycled, however, does require a RCRA permit [40 CFR 261.6(c)].

RCRA Permitting Activity at DOE Facilities

DOE owns/operates existing permitted and interim status hazardous and RMW management facilities, which already require Department personnel to be involved in certain types of permitting activities. Beyond this, the level of DOE's permitting activity for RMW and hazardous waste management facilities is expected to increase as the Department comes into compliance with LDR treatment standards, the LDR storage prohibition, and HSWA corrective action requirements. Other factors that may influence (either positively or negatively) the future level of RCRA permitting activity within the DOE complex include DOE's waste minimization program, which involves developing strategies to reduce the volume of wastes produced; DOE's Environmental Management Program Ten-Year Plan to complete cleanup at DOE nuclear sites within a decade, which may influence the amount and rate of remediation wastes generated in the future; and DOE's Waste Management Programmatic Environmental Impact Statement, which as drafted [DOE/EIS-0200-D, *Draft Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage and Disposal of Radioactive and Hazardous Wastes* (August 1995)], considers various future waste management facility configurations for hazardous and radioactive wastes.

Overview of Chapters and Modules

Chapter 1: Interim Status

Chapter 1 discusses the requirements applicable to hazardous waste and RMW treatment, storage, and disposal facilities (TSDFs) that qualify for interim status. During interim status, a qualifying hazardous waste TSDF is treated as having been issued a RCRA permit, even though a final permit decision has not been made. Congress created interim status in the original RCRA legislation to allow existing hazardous waste TSDFs to continue operating until EPA and authorized States could issue permits.

The modules of Chapter 1 include: Module 1-1, Eligibility for Interim Status; Module 1-2, Part B Permit Application Deadlines and Loss of Interim Status (LOIS); and Module 1-3, Changes During Interim Status. The chapter addresses several

differences in filing deadlines and interim status eligibility for hazardous wastes compared with RMW.

Module 1-1 presents the criteria that TSDFs must meet to qualify for interim status. These criteria include (1) being in existence on the date of statutory or regulatory changes that subject the facility to RCRA permitting requirements; (2) notifying the responsible regulatory agency of hazardous waste activity within a specified time; and (3) submitting a RCRA Part A permit application within a specified time. Facilities that have previously been denied RCRA permits or that have had RCRA permits terminated are not eligible for interim status.

Module 1-2 discusses the conditions under which interim status might be terminated. Such conditions include (1) failure to submit a Part B permit application by the appropriate deadlines; (2) being denied a RCRA permit; (3) making unallowable physical changes to the facility; and (4) failure to obey a compliance order issued under Section 3008(a) of RCRA (40 CFR 270.73). The deadlines by which interim status facilities must file RCRA Part B permit applications are presented in this module.

Module 1-3 explains the requirements for making physical changes to TSDFs during interim status. Certain changes, which the module delineates, can be made by submitting revised Part A permit applications before making changes and, in some cases, also submitting justifications of the need for change (40 CFR 270.72).

Chapter 2: RCRA Permit Application

Chapter 2 consists of five modules covering RCRA permit application deadlines for new facilities, the contents of RCRA permit applications, the waste minimization certifications and exposure assessments that must accompany RCRA permit applications, RCRA permit renewal procedures, and suggestions on submitting RCRA permit applications and renewal requests.

Module 2-1 explains that Parts A and B of the RCRA permit application must be submitted together at least 180 days before the expected date for starting construction of a new TSD facility [40 CFR 270.10(f)].

Module 2-2 covers the required contents of Parts A and B of the RCRA permit application. In this module, detailed exhibits list mandated information with applicable cross-references to the RCRA regulations. Module 2-2-1 also provides information about filling out the RCRA Part A application form that is not covered by the EPA instructions accompanying the form, and that is peculiar to DOE facilities. Module 2-2-2 adds information about evaluating the completeness and technical adequacy of Part B of the RCRA permit application and, in ten sections, describes how to prepare the required information for each aspect of the Part B application. Aspects discussed

include facility description, waste characterization, process information, groundwater monitoring, procedures to prevent hazards, contingency plan, personnel training, closure and post-closure plans, corrective action for solid waste management units, and Part B certification.

Module 2-3 reviews the RCRA regulatory requirement that permit holders certify at least annually that (1) they have a program in place to reduce the volume and toxicity of hazardous waste generated; and (2) they have chosen the most practicable method currently available for treating, storing, or disposing of hazardous waste so as to minimize threat to human health and the environment. This module also addresses the requirement that RCRA permit applications contain exposure assessments.

Module 2-4 points out that RCRA permits are issued for fixed terms, not exceeding 10 years [40 CFR 270.50(a)]. At the end of a permit's term, either a permit renewal application must be submitted to the responsible regulatory agency or the facility must be closed. Module 2-4 discusses the required contents of renewal applications, the deadline for such applications, and the conditions under which expiring permits will continue until new permits have been issued.

Module 2-5 contains some common-sense suggestions intended to expedite processing of RCRA permit applications.

Chapter 3: Managing RCRA Permitting

Chapter 3 consists of four modules that discuss planning for RCRA permitting, how RCRA permit applications are processed, the issuance of draft RCRA permits, and the duration and termination of RCRA permits. The purpose of the chapter is to place RCRA permitting of DOE TSDFs into the global context of environmental permitting. With this purpose in mind, Module 3-1 provides information to assist DOE personnel in (1) determining whether activities at a planned TSD unit at a new or existing facility require a RCRA permit; (2) ensuring that applicable non-RCRA requirements have been met; and (3) determining requisite public participation.

Module 3-2 covers RCRA permit application processing. The steps for permit processing mandated by 40 CFR parts 124 and 270 are covered, as are the provisions giving EPA the options to consolidate RCRA permit processing with the processing of environmental permits required by other laws. Suggestions are offered for interfacing with the responsible regulatory agency before and during agency handling of the application.

Module 3-3 reviews the administrative process whereby the responsible regulatory agency makes its final decision on whether to issue a draft RCRA permit or deny the

application. The regulatory provisions for public comment and hearings on draft RCRA permits are covered, as is the process for permit decision appeals.

Module 3-4 discusses the requirements for complying with the conditions of a permit during its term and the procedures used for terminating permits.

Chapter 4: RCRA Permit Modification

During the term of a RCRA permit held by DOE, modifications to the permit may result from requests made by DOE, requests made by interested third parties, or initiatives of the responsible regulatory agency. Chapter 4 contains information on situations that may result in permit modifications and the regulations applicable to those situations.

Module 4-1 covers modifications made at the request of DOE, which may include modifications to (1) correct permit errors and accommodate routine facility changes (Class 1 modifications); (2) accommodate substantive facility changes needed to maintain the facility's capability to manage wastes safely or conform to new requirements (Class 2 modification); or (3) accommodate significant physical and operational facility changes (Class 3 modifications).

Module 4-2 covers the conditions under which modification, revocation and reissuance and termination for cause of RCRA permits may occur, either at the request of interested third parties or on the initiative of the responsible regulatory agency.

Chapter 5: Special Forms of Permits

Chapter 5 contains three modules addressing (1) emergency permits; (2) research, development and demonstration (RD&D) permits; (3) and post-closure permits. Other special forms of RCRA permits that are also issued, but not discussed in Chapter 5, include permits by rule, hazardous waste incinerator permits, permits for land treatment demonstrations using field test or laboratory analyses, interim permits for underground injection control wells, and permits for boilers and industrial furnaces burning hazardous waste. RCRA permitting requirements for hazardous waste incinerators and boilers and industrial furnaces burning hazardous wastes are covered in Chapter 2. Permits by rule are not covered because (1) DOE is not expected to conduct operations that would qualify for two of the three available permits by rule (i.e., ocean disposal pursuant to an ocean dumping permit and injection well disposal pursuant to an underground injection permit), and (2) as federally owned treatment works (FOTWs), DOE treatment facilities holding NPDES permits do not fall within the scope of the third available permit by rule (i.e., publicly owned treatment works (POTWs) holding NPDES permits). Permits for land treatment demonstrations and interim

permits for underground injection control wells are not covered because DOE is not expected to conduct operations for which these special permits would be appropriate.

Module 5-1 explains the criteria for issuing emergency permits for periods of up to 90 days in situations involving imminent and substantial threat to human health or the environment.

Module 5-2 summarizes the regulatory requirements for obtaining RD&D permits that are issued to innovative and experimental hazardous waste treatment technologies or processes for which standards have not been promulgated.

Module 5-3 discusses RCRA post-closure permits, which govern the performance of post-closure care at facilities that have previously held RCRA operating permits, or have operated under interim status.

Chapter 6: Federal/State Authority and Implementation

Chapter 6 briefly describes the provisions whereby EPA grants States and Territories authorization to implement the RCRA Subtitle C hazardous waste program within their boundaries. The scope of authorizations before and after Congress passed the Hazardous and Solid Waste Amendments of 1984 is addressed. Also discussed are RCRA permitting responsibilities in authorized State and Territories.

Module 6-1 explains that, before HSWA, States that applied and were found qualified by EPA to do so, could take over administration and enforcement of the RCRA Subtitle C program within their State boundaries entirely in lieu of the Federal program. This module also explains the three exceptions to this rule created by HSWA. In States that have received no RCRA program authorization at all, EPA administers the Federal RCRA Subtitle C program.

Module 6-2 discusses the apportionment of RCRA permitting responsibilities between EPA and the State in authorized States.

Chapter 7: Integration with Other Laws

Chapter 7 reviews Federal laws, implementing regulations, and Executive Orders that were not addressed in Chapter 3. Included are the Atomic Energy Act (DOE Orders), the Archeological and Historic Preservation Act, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Toxic Substances Control Act (TSCA), and Executive Orders 11988 "Floodplain Management," 11990 "Protection of Wetlands," 12088 "Federal Compliance with Right-to-Know Laws and Pollution Prevention" and 12898 "Federal Actions to Address Environmental Justice." Recommendations are made for interfacing these laws, implementing regulations and Executive Orders with RCRA permitting requirements.

References

Statutes

Resource Conservation and Recovery Act, P.L. 94-580, as amended.

Atomic Energy Act of 1954, P.L. 83-703, as amended.

Regulations

10 CFR Part 962, "Byproduct Material."

40 CFR Part 124, "Procedures for Decisionmaking."

40 CFR Part 260, "Hazardous Waste Management System: General.."

40 CFR Part 261, "Identification and Listing of Hazardous Waste"

40 CFR Part 262, "Standards Applicable to Generators of Hazardous Waste."

40 CFR Part 264, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities."

40 CFR Part 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities."

40 CFR Part 268, "Land Disposal Restrictions."

40 CFR Part 270, "EPA Administered Permit Programs: The Hazardous Waste Permit Program."

40 CFR Part 271, "Requirements for Authorization of State Hazardous Waste Programs."

Federal Register

51 FR 24504 (July 3, 1986), "EPA Clarification of Regulatory Authority Over Radioactive Mixed Waste."

52 FR 15937 (May 1, 1987), "Radioactive Waste; Byproduct Material."

55 FR 30798 (July 27, 1990), "Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities; Proposed Rule."

56 FR 42730 (August 29, 1991), "Policy on Enforcement of RCRA Section 3004(j) Storage Prohibition at Facilities Generating Mixed Radioactive/Hazardous Wastes."

60 FR 40204 (August 7, 1995), "Joint NRC/EPA Guidance on the Storage of Mixed Low-Level Radioactive and Hazardous Waste, Draft for Comment."

61 FR 62153 (November 29, 1996), "Semiannual Regulatory Agenda, Environmental Protection Agency."

61 FR 19432 (May 1, 1996), "Corrective Action for Releases From Solid Waste Management Units at Hazardous Waste Management Facilities; Advance Notice of Proposed Rulemaking."

Other Publications

U.S. Department of Energy, *Draft Waste Management Programmatic EIS for Managing Treatment, Storage and Disposal of Radioactive and Hazardous Waste* (DOE/EIS-0200-D, August 1995).

[This Page Intentionally Blank]