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REVISED RCRA INSPECTION MANUAL

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Office of Waste Programs Enforcement
RCRA Enforcement Division

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Foreword

The RCRA Inspection Manual was originally developed and issued by the RCRA Enforcement Division of U.S. EPA's Office of Waste Programs Enforcement in 1988. The Manual was intended for the exclusive use of inspection personnel in conducting field inspections of RCRA-regulated facilities under U.S. EPA or State program authorities. Since 1988, significant regulatory developments have occurred and the need to provide a more useful tool for inspectors has grown.

The overall goal of this Manual, then, is to provide useful procedural and technical information to determine facility compliance with RCRA standards. Specific objectives are as follows:

- To provide a detailed overview of the elements of RCRA Compliance Evaluation Inspections (CEIs)
- To describe the scope of inspector authorities and responsibilities
- To provide detailed standard procedures for performing RCRA inspections
- To provide general inspection information that is comprehensive in scope and complements more detailed guidance on inspecting particular types of hazardous waste facilities
- To provide a basis for general training of new inspection personnel in RCRA inspection procedures
- To make essential regulatory information readily accessible to inspectors.

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1.0 Introduction

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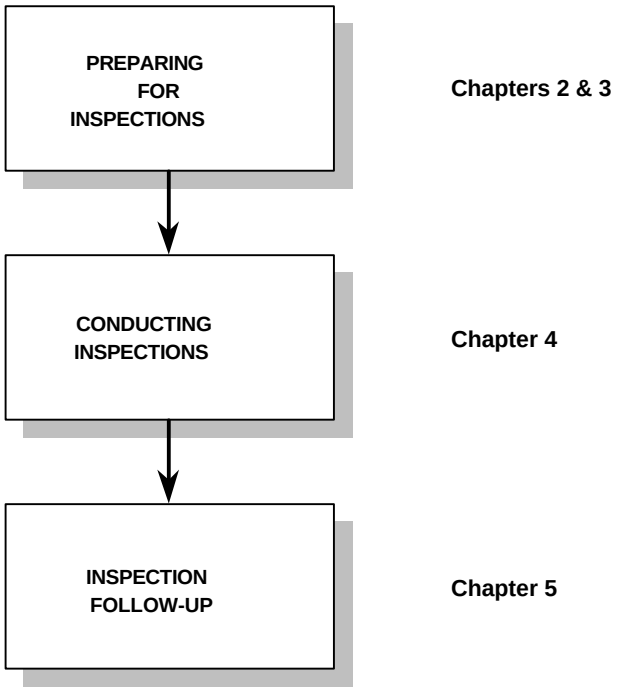
1.1 Background

Introduction

This chapter will:

- Provide an overview of the RCRA program, summarizing the purpose of the statute, applicable federal regulatory standards, and authorization of state RCRA programs
- Provide an overview of the RCRA enforcement program, including a description of the types of RCRA inspections, their role in the enforcement program, and available guidance
- Briefly explain the basis for the RCRA program's enforcement priorities and their potential impact on inspectors
- Summarize an inspector's authority and responsibilities under RCRA §3007
- Offer insight into health and safety concerns about which inspectors should be aware
- Discuss the work ethics expected of an inspector.

The remainder of this Manual will provide inspectors with detailed procedures and guidelines for inspection preparation, conducting inspections, and inspection follow-up.



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The **primary purpose** of this Manual is to provide procedural and technical guidance for performing inspections of facilities regulated by the Resource Conservation and Recovery Act of 1976 (RCRA). The main text consists of five sections and discusses pre-inspection, inspection, and post-inspection procedures. The remainder of the Manual contains appendices that provide technical information of potential use to inspectors.

The procedures covered in the main text relate to performance of Compliance Evaluation Inspections (CEIs) of hazardous waste generators; transporters; and treatment, storage, and disposal facilities (TSDFs). However, these procedures may also be applicable to other types of RCRA inspections (which are discussed in Section 1.2); they are general and are not intended to be prescriptive, in deference to Regional and state differences in approaches and procedures. Inspectors using this Manual should be aware of and follow additional Regional or state guidance supplementing the information provided herein.

The RCRA Program

RCRA is the primary statute governing the regulation of solid and hazardous waste. It completely replaced the Solid Waste Disposal Act of 1965 and supplemented the Resource Recovery Act of 1970; RCRA itself was substantially amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA).

The *principal objectives of RCRA*, as amended, are to:

- **Promote the protection of human health and the environment from potential adverse effects of improper solid and hazardous waste management**
- **Conserve material and energy resources through waste recycling and recovery**
- **Reduce or eliminate the generation of hazardous waste as expeditiously as possible.**

To achieve these objectives, RCRA authorizes EPA to regulate the generation, treatment, storage, transportation, and disposal of hazardous wastes.[1] The structure of the national hazardous waste regulatory program envisioned by Congress is laid out in Subtitle C of RCRA (Sections 3001 through 3019), which authorizes EPA to:

- Promulgate standards governing hazardous waste generation and management
- Promulgate standards for permitting hazardous waste treatment, storage, and disposal facilities
- Inspect hazardous waste management facilities

[1] RCRA also provides EPA with authority to regulate solid waste and underground storage tanks. Programs established under these authorities are not within the scope of this Manual.

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- Enforce RCRA standards
- Authorize states to manage the RCRA Subtitle C program, in whole or in part, within their respective borders, subject to EPA oversight.

Federal RCRA Standards

Federal RCRA hazardous waste regulations are set forth in 40 CFR Parts 260 through 272. The core of the RCRA regulations establishes the "cradle to grave" hazardous waste regulatory program through seven major sets of regulations:

- Identification and listing of regulated hazardous wastes (Part 261)
- Standards for generators of hazardous waste (Part 262)
- Standards for transporters of hazardous waste (Part 263)
- Standards for owners/operators of hazardous waste treatment, storage, and disposal facilities (Parts 264, 265, and 267)
- Standards for the management of specific hazardous wastes and specific types of hazardous waste management facilities (Part 266)
- Land disposal restriction standards (Part 268)
- Requirements for the issuance of permits to hazardous waste facilities (Part 270)
- Standards and procedures for authorizing state hazardous waste programs to be operated in lieu of the federal program (Part 271).

☞ **Appendix I discusses how inspectors can keep up with changes in the RCRA standards, and identifies sources of regulatory information.**

State Authorization in the RCRA Program

EPA, under Section 3006 of RCRA, may authorize a state to administer and enforce a state hazardous waste program in lieu of the federal Subtitle C program. To receive authorization a state program must:

- Be equivalent to the federal Subtitle C program
- Be consistent with, and no less stringent than, the federal program and other authorized state programs
- Provide adequate enforcement of compliance with Subtitle C requirements.

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In practical terms, these requirements mean that, to be authorized, state hazardous waste regulations must be at least as stringent as federal Subtitle C standards; state regulations and programs must follow the same general approach as federal regulations and programs, and other state regulations and programs; state enforcement penalties must be at least equivalent to penalties provided for in RCRA; and state enforcement activities must be equivalent to those performed by EPA.

States have generally received authorization incrementally, consistent with the gradual implementation of the federal RCRA program (i.e., the ongoing development of regulations governing new waste management units and practices), due largely to the unavoidable lag between federal promulgation of Subtitle C standards and development and adoption of equivalent standards by the states. Thus, states may be authorized to administer and enforce the program covering certain types of waste management units and practices within the state and may not be authorized for other types of units. For example, a state may be authorized to manage the program for hazardous waste generators and storage and treatment facilities, but may not be authorized for a newer regulation based on HSWA. As a result, some facilities in a state may be subject to state enforcement, and others subject to federal enforcement through EPA Regional offices. Facilities with several types of units may be subject to joint federal/state enforcement.

In general, where a facility is subject to joint federal/state authority, inspections may be conducted by both federal EPA and state inspectors. These inspections may be conducted jointly or separately. When acting jointly, federal and state inspectors should focus their efforts on the units subject to their respective jurisdictions. When working separately, federal or state inspectors may inspect units which are not under their jurisdiction and identify non-complying conditions. These conditions should then be reported to the agency with jurisdiction over the unit(s) for further action.

Currently, all states are authorized to administer or enforce their own programs, except for the following:

Iowa

Wyoming

Hawaii

Alaska

Following are two maps, Exhibits 1-1 and 1-2, detailing the states that are authorized for specific aspects of the RCRA program, corrective action and mixed waste. Inspectors should also be aware of the authorization status of states with respect to other aspects of the RCRA program.

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Exhibit 1-1
RCRA Mixed Waste Authorization as of October 1, 1993

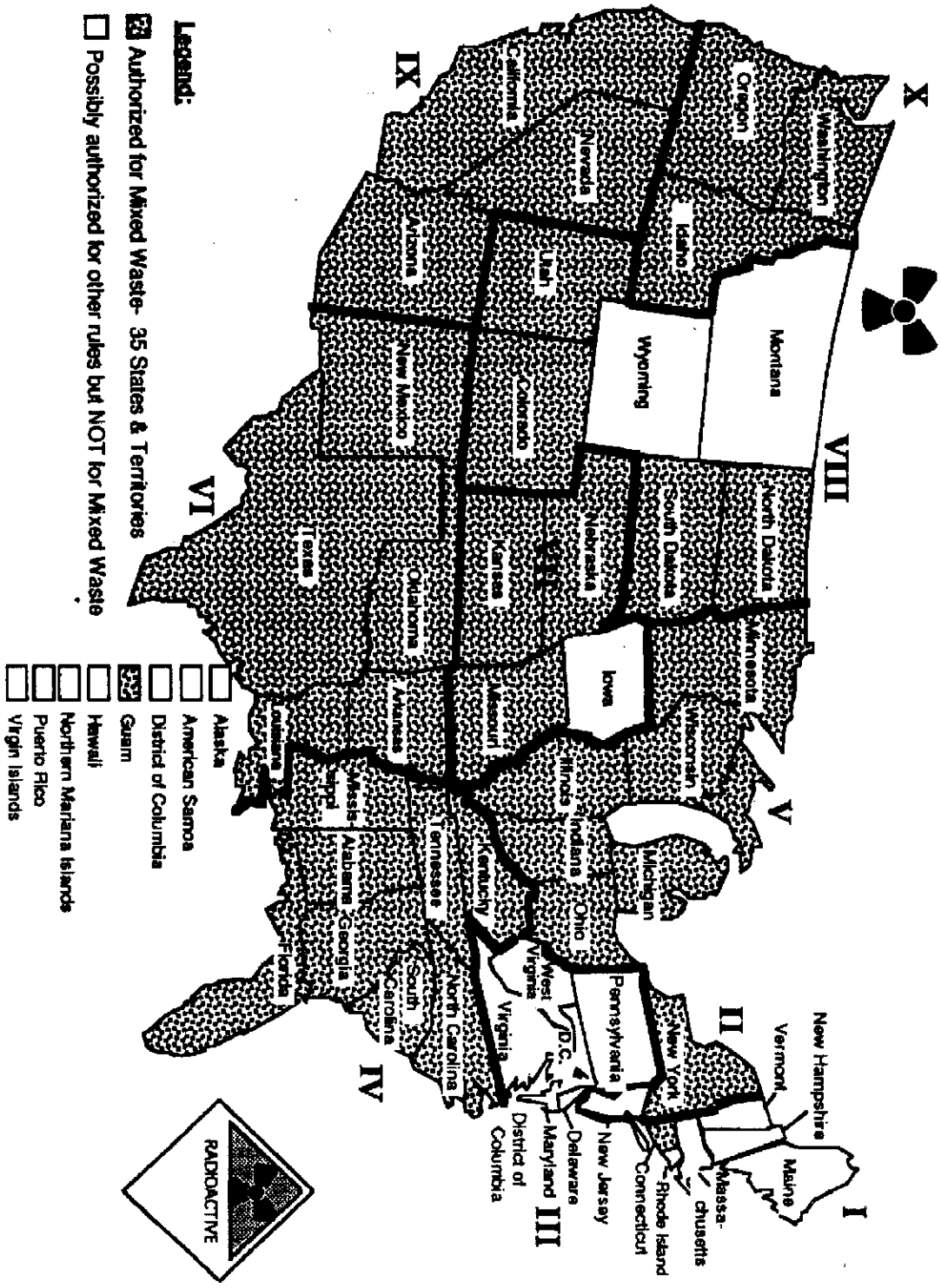

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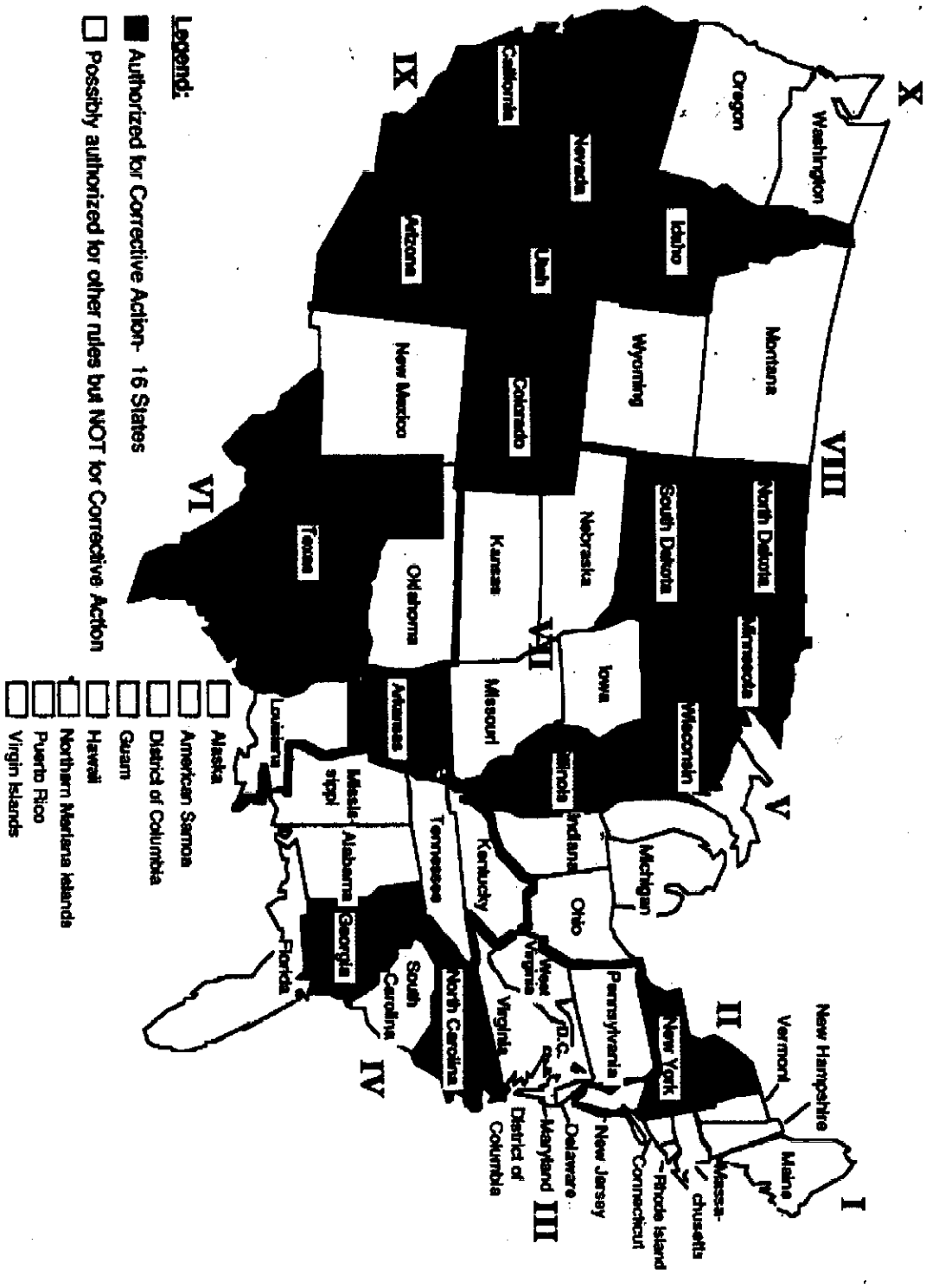
Exhibit 1-2
RCRA Corrective Action Authorization as of October 1, 1993



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1.2 Enforcement Overview

The **goal of the RCRA enforcement program** is to assure that hazardous waste handlers are properly complying with RCRA regulations. This requires close monitoring of such handlers and expeditious legal action when non-compliance is detected. Facility inspections by EPA/state officials are the primary tool for monitoring compliance. EPA/states may also determine compliance through examination of required reports submitted by waste handlers. When non-compliance is detected, an enforcement action may follow.

Types of Inspections

There are many types of inspections; however, the CEI is the primary mechanism for detecting and verifying RCRA violations by hazardous waste generators, transporters, and TSDFs.

Types of inspections differ based upon the purpose, facility status, and the probable use of inspection results. The Office of Waste Programs Enforcement has developed, and is continuing to develop, specific guidance on performing the different types of inspections. Exhibit 1-3 below describes the various types of inspections, and lists the available and planned guidance for each type.

Enforcement Actions

When a violation is detected, an enforcement action may be initiated to compel the violator to return to compliance and/or possibly make compensation. EPA/states may use the evidence collected through inspections to determine which of the following enforcement options, if any, to pursue:

- Administrative action (warning letter, administrative order, administrative penalty, permit action)
- Civil court action
- Criminal court action.

A decision to pursue one or more of these options should be based on the nature and severity of the violation and the strength of available evidence.

For further information regarding the options described above, inspectors should review the 1990 RCRA Civil Penalty Policy and/or contact the RCRA Docket (202-260-9327).

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Exhibit 1-3
Inspection Types and Relevant Guidance

Type of Inspection	Description	Guidance
Compliance Evaluation Inspection (CEI)	CEIs are routine inspections of hazardous waste generators, transporters, and TSDFs to evaluate compliance with the requirements of RCRA. CEIs encompass a file review prior to the site visit; an on-site examination of generation, treatment, storage or disposal areas; and a review of records. Inspections of facilities with delisted waste may be conducted as part of a CEI. Also, corrective action inspections are specifically intended to evaluate facilities' compliance with consent and permit orders.	• The RCRA Inspection Manual • The LDR Inspection Manual • Hazardous Waste Tank Systems Inspection Manual, OSWER Dir. 9938.1A, 1988 • Hazardous Waste Incinerator Inspection Manual, OSWER Dir. 9938.6, 1989 • Guidance for Inspection of Facilities with Delisted Waste, OSWER Dir. 9938.2B (to be issued) • Conducting RCRA Inspections at Mixed Waste Facilities, OSWER Dir. 9938.9, 1991
Case Development Inspection (CDI)	CDIs are conducted when RCRA violations are suspected or revealed during a CEI for the specific purpose of gathering data in support of an enforcement action.	• Technical Case Development Guidance Document, OSWER Dir. 9938.3, 1988
Comprehensive Ground-Water Monitoring Evaluation (CME)	CMEs are conducted to ensure that ground-water monitoring systems are designed and function properly at RCRA land disposal facilities. In addition to the CEI activities, CMEs include sampling and analysis of the facility's ground-water monitoring system and hydrogeological conditions.	• RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, OSWER Dir. No. 9950.1, September 1986 • Comprehensive Ground-Water Monitoring Evaluation Guidance Document, OSWER Dir. No. 9950.2, December 1986
Compliance Sampling Inspection (CSI)	CSIs are inspections in which samples are collected for laboratory analysis. A sampling inspection may be conducted in conjunction with a CEI or any other type of inspection, except a CDI.	
Operation and Maintenance Inspection (O&M)	O&M inspections of land disposal facilities are conducted to determine the adequacy of the operation and maintenance of ground-water monitoring systems at RCRA facilities after a land disposal facility has closed. O&M inspections are usually conducted at facilities that have already received a thorough evaluation of the ground-water monitoring system under a CME inspection.	• Operation and Maintenance Inspections for Ground-Water Monitoring (RCRA Ground-Water Monitoring Systems), OSWER Dir. No. 9950.3, March 1988
Laboratory Audit	Laboratory audits are inspections of laboratories performing sample analyses. Audits ensure that these laboratories are using proper sample handling and analysis protocols.	• RCRA Laboratory Audit Inspection Guidance Document, OSWER Dir. 9950.4, 1988
State Oversight Inspection	State oversight inspections are conducted by U.S. EPA personnel to determine the effectiveness of State hazardous waste management programs and to determine facility compliance.	• RCRA State Oversight Inspection Guide, OSWER Dir. No. 9946.1, December 1987

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1.3 Enforcement Priorities

RCRA enforcement managers at EPA Headquarters, Regional offices, and state agencies establish priorities for inspecting RCRA regulated facilities to optimize the use of limited resources to achieve enforcement objectives. Generally, priorities are established annually in the "RCRA Implementation Plan" (RIP) and are based on Congressional mandates and the facility's "Environmental Priority." A facility's Environmental Priority is based on its environmental significance, the potential environmental benefits from enforcement, and other considerations. The priorities change from year to year to reflect new information and program changes including:

- Promulgation of new standards governing specific types of facilities or activities (e.g., land disposal regulations (LDR))
- Expansion of the regulatory program to cover new types of facilities
- Progression of the RCRA enforcement program to new stages of implementation (e.g., from CMEs to O&M)
- Specific national or regional enforcement initiatives focused on particular rules, types of facilities, or geographic areas.

Inspectors should be knowledgeable about the current enforcement priorities and develop the skills necessary to perform the inspections required to meet those priorities. Inspectors must also be aware of changes in the priorities to identify new training needs and other ways (i.e., inspection preparation) they may need to reassess their approach to inspections.

Frequently, inspectors, through training, research, and experience, develop specialized skills in inspecting a particular type of facility or evaluating a waste management practice. Although this can be valuable, inspectors also must develop and maintain a solid general knowledge of the overall RCRA program so that they can flexibly respond to new enforcement priorities or changes in assignments which require them to inspect types of facilities and practices previously unfamiliar to them.

Inspectors should:

- **Review major new regulations (including preambles) as they are promulgated**
- **Be familiar with new and existing guidance on inspecting other types of facilities and practices**
- **Be aware of new and existing technical guidance that could provide quick background information on other types of facilities and practices.**

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New regulations can be found in the Code of Federal Regulations. Inspection and technical guidance can be identified by contacting the RCRA Docket (202-260-9327).

Inspectors should also be ready to provide input to enforcement program managers planning initiatives that are within the inspectors' areas of expertise. In such instances, inspectors may be able to expedite information collection or identify technical difficulties or issues which should be considered in the planning stage.

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1.4 Authority and Limitations of Inspectors

RCRA Section 3007 provides inspectors with the authority to conduct inspections and specifies certain guidelines that should govern the conduct of an inspection. It is essential that all inspectors be familiar with Section 3007, presented in Exhibit 1-4 below, or comparable, applicable state authority.

RCRA provides the authority to conduct inspections of facilities for the purpose of developing regulations, preparing permits, or ensuring compliance with the provisions or regulations promulgated under RCRA. Access to such facilities is granted to "duly designated" officers, employees, or representatives of EPA (or an authorized state).

Specifically, inspectors are authorized to:

- **Enter any establishment or location where hazardous wastes are, or have been, generated, transported, stored, treated, or disposed**
- **Obtain samples for the inspection of any such wastes as well as samples of any containers or labeling for such wastes**
- **Access and copy all records relating to such wastes.**

Inspections must be conducted in a prescribed manner, which includes the following:

- Presenting EPA or state identification
- Entering an establishment at a reasonable time and completing the inspection as promptly as possible
- Issuing a receipt for any samples obtained
- Providing a duplicate sample (split sample), if requested
- Furnishing a copy of any sample analysis, if conducted, to the owner/operator, or agent in charge.

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Exhibit 1-4
RCRA Section 3007
(As Amended by the Solid Waste Disposal Act of 1980 and the Hazardous and Solid Waste Amendments of 1984)

INSPECTIONS

Sec. 3007. (a) **ACCESS ENTRY**.—For purposes of developing or assisting in the development of any regulation or enforcing the provisions of this title, any person who generates, stores, treats, transports, disposes of, or otherwise handles or has handled hazardous waste shall, upon request of any officer, employee or representative of the Environmental Protection Agency, duly designated by the Administrator, or upon request of any duly designated officer, employee or representative of a State having an authorized hazardous waste program, furnish information relating to such wastes and permit such person at all reasonable times to have access to, and to copy all records relating to such wastes. For the purposes of developing or assisting in the development of any regulation or enforcing the provisions of this title, such officers, employees or representatives are authorized —

(1) to enter at reasonable times any establishment or other place where hazardous wastes are or have been generated, stored, treated, disposed of, or transported from;

(2) to inspect and obtain samples from any person of any such wastes and samples of any containers or labeling for such wastes.

Each such inspection shall be commenced and completed with reasonable promptness. If the officer, employee, or representative obtains any samples, prior to leaving the premises, he shall give to the owner, operator, or agent in charge a receipt describing the sample obtained and if requested a portion of each such sample equal in volume or weight to the portion retained. If any analysis is made of such samples, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge.

(b) **AVAILABILITY TO PUBLIC**.—1) Any records, reports, or information (including records, reports, or information obtained by representatives of the Environmental Protection Agency) obtained from any person under this section shall be available to the public, except that upon a showing satisfactory to the Administrator (or the State, as the case may be) by any person that records, reports, or information, or particular part thereof, to which the Administrator (or the State, as the case may be) or any officer, employee or representative thereof has access under this section if made public, would divulge information entitled to protection under section 1905 of title 18 of the United States Code, such information or particular portion thereof shall be considered confidential in accordance with the purposes of that section, except that such record, report, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this Act, or when relevant in any proceeding under this Act.

(2) Any person not subject to the provisions of section 1905 of title 18 of the United States Code who knowingly and willfully divulges or discloses any information entitled to protection under this subsection shall, upon conviction, be subject to a fine of not more than $5,000 or to imprisonment not to exceed one year, or both.

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Exhibit 1-4 (Continued)
RCRA Section 3007

(3) In submitting data under this Act, a person required to provide such data may —

(A) designate the data which such person believes is entitled to protection under this subsection, and

(B) submit such designated data separately from other data submitted under this Act.

A designation under this paragraph shall be made in writing and in such manner as the Administrator may prescribe.

(4) Notwithstanding any limitation contained in this section or any other provision of law, all information reported to, or otherwise obtained by, the Administrator (or any representative of the Administrator) under this Act shall be made available, upon written request of any duly authorized committee of the Congress, to such committee.

(c) **FEDERAL FACILITY INSPECTIONS**.—Beginning twelve months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984, the Administrator shall, or in the case of a State with an authorized hazardous waste program the State may, undertake on an annual basis a thorough inspection of each facility for the treatment, storage, or disposal of hazardous waste which is owned or operated by a Federal agency to enforce its compliance with this subtitle and the regulations promulgated thereunder. The records of such inspections shall be available to the public as provided in subsection (b).

(d) **STATE-OPERATED FACILITIES**.—The Administrator shall annually undertake a thorough inspection of every facility for the treatment, storage, or disposal of hazardous waste which is operated by a State or local government for which a permit is required under section 3005 of this title. The records of such inspection shall be available to the public as provided in subsection (b).

(e) **MANDATORY INSPECTIONS**.—(1) The Administrator (or the State in the case of a State having an authorized hazardous waste program under this subtitle) shall commence a program to thoroughly inspect every facility for the treatment, storage, or disposal of hazardous waste for which a permit is required under section 3005 no less often than every two years as to its compliance with this subtitle (and the regulations promulgated under this subtitle). Such inspections shall commence not later than twelve months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984. The Administrator shall, after notice and opportunity for public comment, promulgate regulations governing the minimum frequency and manner of such inspections, including the manner in which records of such inspections shall be maintained and the manner in which reports of such inspections shall be filed. The Administrator may distinguish between classes and categories of facilities commensurate with the risks posed by each class or category.

(2) Not later than six months after the date of enactment of the Hazardous and Solid Waste Amendments of 1984, the Administrator shall submit to the Congress a report on the potential for inspections of hazardous waste treatment, storage, or disposal facilities by nongovernmental inspectors as a supplement to inspections conducted by officers, employees, or representatives of the Environmental Protection Agency or States having authorized hazardous waste programs or operating under a cooperative agreement with the Administrator. Such report shall be prepared in cooperation with the States, insurance companies offering environmental impairment insurance, independent companies providing inspection services, and other such groups as appropriate. Such report shall contain recommendations on provisions and requirements for a program of private inspections to supplement governmental inspections.

[42 U.S.C. 6927]

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Although compliance inspections may result in enforcement actions, they generally will not involve the need to inform individuals of their rights under the Fifth Amendment of the United States Constitution (e.g., to provide them with a "Miranda" warning). The Fifth Amendment provides that "No person shall be compelled in any criminal case to be a witness against himself." Because inspections under RCRA are generally not conducted by law enforcement officers and do not involve custodial situations (when a person is taken into custody), Fifth Amendment rights normally are not implicated.

Confidential Business Information

Inspectors who conduct RCRA inspections will probably encounter confidential business information (CBI) during the course of their work. Inasmuch as this information may only be viewed by individuals who have been cleared for access, all inspectors should have CBI access authorization. This authorization is granted by either the EPA's Deputy Administrator for General Enforcement or the duly designated state-level representative in the case of a state-run hazardous waste program.

When inspectors return from an inspection with information that a facility owner/operator has declared to be confidential, they should immediately give such information to the local Document Control Officer (DCO) or Document Control Assistant (DCA), who will assign a document control number to the confidential material. In addition, inspectors should inform the DCO or DCA of any physical samples that have been claimed as confidential. These samples will be assigned a document control number, which is given to laboratory personnel for use in completing chain-of-custody and laboratory analysis forms.

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1.5 Health and Safety Considerations

The health and safety of inspection personnel is an important aspect of the overall inspection process that must be seriously considered prior to entry into a facility. The Occupational Safety and Health Administration (OSHA) standards for hazardous materials (Subpart H of 29 CFR Part 1910) were amended in December 1986 by the addition of a new §1910.120, which contains protection requirements for workers involved in hazardous waste operations. This interim final rule, mandated by the Superfund Amendments and Reauthorization Act (SARA) of 1986, regulates employee safety and health at hazardous waste operations and during emergency response actions. Inspectors must be thoroughly familiar with the OSHA health and safety regulations to ensure compliance with those requirements that are applicable to the inspection process.

Another source of information regarding health and safety requirements with which inspectors should be familiar is **U.S. EPA Order No. 1440.2**, titled "Health and Safety Requirements for Employees Engaged in Field Activities." This Order establishes policy, responsibilities, and mandatory requirements for occupational health and safety training and for occupational medical monitoring of EPA employees engaged in field activities; therefore, RCRA inspectors must be familiar with its contents.

All hazardous waste management facilities pose some degree of hazard to personnel present on site, and this hazard increases in direct proportion to the decrease in the amount and quality of information available to these personnel on facility operations and practices.

☞ **Therefore, it is extremely important that inspectors understand a facility's processes and hazardous waste management practices prior to entering a facility so that they are aware of all the potential health and safety issues and follow the appropriate procedures during an inspection.**

In addition to reviewing federal, state, and/or local files and interviewing regulatory personnel who are familiar with a facility, inspectors should also consult the Regional Safety Officer or equivalent state official regarding potential hazards before undertaking an inspection. Even though thoroughly familiar with available information regarding a facility, inspectors still may not have all the information needed to make sound health and safety judgments; therefore, common sense and experience must enter into determinations and decisions. Inspectors should not assume that an owner/operator knows all of the safety concerns that may apply to a facility, and should not take statements made by the owner/operator concerning the safety of an activity or location at the facility at face value.

The RCRA inspector should have a working knowledge of the following health- and safety-related areas and issues:

- Potential exposure routes

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- Hazard assessment
- Long-term risk
- Levels of protection
- Safety equipment (use and maintenance)
- Personal protective equipment (use and maintenance)
- Decontamination and disposal of protective clothing
- Emergency treatment.

Exhibit 1-5 presents a partial listing of guidance documents that are available on health and safety issues related to hazardous waste management. Inspectors are referred to these documents for detailed information on the areas and issues identified above.

Exhibit 1-5
Health and Safety Guidance Documents

"Appendix M, Site Safety Plan Guidance: Draft." OSWER 9375.1-2A-C. U.S. Environmental Protection Agency. December 30, 1986. Provides information on health and safety to supplement Regional Office safety procedures.

"Chemical Engineering Preparedness Program, Interim Guidance," U.S. Environmental Protection Agency. Program Directive No. 9223.0-01A. OERR, Catalog of Program Directives. December 1986. Establishes criteria for identifying acutely toxic chemicals.

Chemical Manufacturers Association, 1825 Connecticut Avenue, N.W., Washington, D.C. 20009. The CMA has many publications that give complete information on health and fire hazards, handling, storage, labeling, packaging, and transportation. A list of publications is available.

"Dangerous Properties of Industrial Materials," Sax, Newton Irving, Reinhold Publishing Corporation, New York, 1989 Seventh Edition. Contains information covering more than 12,000 hazardous materials. Areas of hazard covered include radiation hazards, industrial fire protection, storage and handling of hazardous materials, respiratory protection, and personal hygiene.

"Environmental Monitoring Series: Hazardous Materials Spill Monitoring Safety Handbook and Chemical Hazard Guide Part A." EPAx8602-0151. U.S. Environmental Protection Agency. 1979. Presents information on hazards from spills of chemical compounds, exposure, prevention, protection, and first-aid measures to be followed by response personnel.

"Fire Protection Guide To Hazardous Materials," National Fire Protection Association, 60 Batterymarch Street, Boston, Massachusetts 02110. This publication is a complete volume on the fire, explosion, and health characteristics of many chemicals and materials. It contains complete texts of the following NFPA documents: 325M, 49, 491M, and 704.

"Guidance on Remedial Investigations Under CERCLA," U.S. Environmental Protection Agency, HWERL, OERR, OWPE. May 1985. Provides guidance on conducting remedial investigations at uncontrolled hazardous waste sites; includes detailed discussion of health and safety issues and procedures.

"Hazardous Waste Site Investigation Training." EPA-8512-0003. U.S. Environmental Protection Agency. 1981. Covers a 5-day training course and includes appendices on toxicology and safety and health policy.

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Exhibit 1-5 (Continued)
Health and Safety Guidance Documents

"Hazardous Material Handling Training Manual," NUS Corporation, Waste Management Services Group. February 1987. Guidance manual used for health and safety training of RCRA and CERCLA field personnel.

"Hazardous Waste Sites and Hazardous Substance Emergencies: Worker Bulletin," EPAx8610-0023. U.S. Department of Health and Human Services. 1982. Provides preliminary guidance to protect health of hazardous waste workers; joint project of EPA, NIOSH, OSHA, and U.S. Coast Guard.

Health effects assessment documents (available for a large number of chemical compounds). U.S. Environmental Protection Agency, Office of Research and Development, Environmental Criteria and Assessment Office. 1984.

"NEIC Safety Manual," U.S. Environmental Protection Agency, Office of Enforcement, National Enforcement Investigation Center, EPA-330/9-74-002-B, Denver, Colorado. February 1977. Provides general guidelines on safety for NEIC personnel; consistent with OSHA requirements.

"Occupational Safety and Health for the Federal Employee," U.S. Department of Labor, Occupational Safety and Health Administration. January 1, 1979. A booklet outlining Federal government policy concerning occupational safety and health protection provided for government employees.

"Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," EPAx8603-0213. NIOSH, OSHA, U.S. Coast Guard, EPA. 1985. Provides guidance on hazards, training, medical programs, protective equipment, decontamination, air monitoring, container handling, and site emergencies.

"Occupational Safety and Health Technical Assistance and Enforcement Guidelines for Superfund," U.S. Environmental Protection Agency. Program Directive No. 9285.3-01. OERR. Catalog of Program Directives. December 1986. Provides direction for OSHA and other field staff who may be called upon to provide technical assistance or conduct enforcement activities at hazardous waste sites.

"Protecting Health and Safety at Hazardous Waste Sites: An Overview," EPAx8603-0208. U.S. Environmental Protection Agency. 1985. Summaries for health protection; details training, medical monitoring, handling waste containers, and wearing personal protective equipment.

"Quality Assurance/Field Operations Methods Manual," U.S. Environmental Protection Agency. Program Directive No. 9355.0-14. OERR. Catalog of Program Directives. December 1986. Provides Remedial Project Managers (RPMs), quality assurance officers, and states with a reference for field procedures.

"OSWER Integrated Health and Safety Policy for Field Activities," U.S. Environmental Protection Agency. Program Directive No. 9285.1-01B. OERR. Catalog of Program Directives. 1988. Provides guidance on health and safety to complement professional judgment and experience and to supplement existing Regional safety criteria.

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1.6 Work Ethics

Inspectors are skilled field professionals who represent regulatory agencies when dealing with industry and the public. As a result, inspection personnel are expected to perform their duties in a professional and responsible manner.

Personnel shall:

- **Develop and report the facts of an investigation completely, accurately, and objectively**
- **Conduct themselves at all times in accordance with the regulations in the EPA handbook, Responsibilities and Conduct for EPA Employees**
- **Avoid, in the course of an investigation, any act or failure to act which could be considered motivated by reason of personal or private gain**
- **Improve continually their professional knowledge and technical skill in conducting hazardous waste inspections.**

Discussed below are several specific topics pertinent to RCRA inspectors.

Conflicts of Interest

A **conflict of interest** may exist whenever an inspector has a personal or private interest in a matter which is related to his or her official duties and responsibilities. It is important to avoid even the appearance of a conflict of interest because such an appearance damages, in the eyes of the public, the integrity of the EPA or state agency and their employees. All employees must, therefore, be constantly aware of situations which are, or give the appearance of being, conflicts of interest when dealing with others inside or outside of the government. For a detailed discussion of situations and/or activities which may result in a conflict of interest, personnel are directed to Responsibilities and Conduct for EPA Employees, which can also be found in the Federal Register (38 FR No. 73), April 17, 1973.

Public Relations

It is important that cooperation be obtained from, and good working relations established with, the public and regulated community. This can best be accomplished by using diplomacy, tact, and persuasion. Even a hostile person should be treated with courtesy and respect. Personnel should not offer opinions concerning any person, regulatory agency, manufacturer or industrial product. All information acquired in the course of duty is for official use only.

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Gifts, Gratuities, Favors, Luncheons, Etc.

An EPA employee is **forbidden** to solicit or accept any gift, gratuity, entertainment (including meals), favor, loan, or any other thing of monetary value from any person, corporation, or group that:

- Has a contractual or financial relationship with EPA
- Has an interest that may be substantially affected by such employee's official actions
- Conducts operations regulated by EPA.

Attempted Bribery

Money in varying amounts may be offered by persons whose activities are being investigated. Offers are usually made by people unfamiliar with EPA rules or regulations. Other bribes may be blatant attempts to whitewash a serious violation or condition or to cause the withholding of damaging information or observations. Inspectors should:

- Ask "What is this for?" if offered something of value
- Explain politely, if the offer is repeated, that both parties to such transactions may be guilty of violating federal statutes
- Decline money or goods of any kind
- Report immediately any such incident, in detail, to his or her supervisor.

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1.7 Summary

In performing their job, RCRA inspectors must keep in mind a number of considerations:

- **The purpose of the RCRA program**
- **The types of inspections that should be performed**
- **The types of enforcement actions that can be brought against violators**
- **Current EPA enforcement priorities**
- **The scope of and limit on permissible action**
- **Ways in which to protect themselves**
- **The need to comply with ethical and legal requirements.**

Although specific skills and knowledge are needed to perform effectively at specific inspection-related tasks, inspectors must internalize the above mentioned considerations to assure a solid foundation for all inspection/enforcement activity.

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2.0 Preparing for an Inspection

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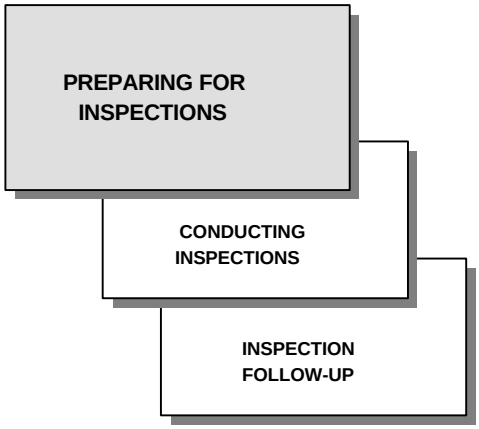

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2.1 Introduction—Purpose and Objectives of Inspection Preparation

Adequate preparation is critical to the effective performance of RCRA inspections. Generally, inspectors have only a relatively brief period of time on-site in which to perform an inspection; therefore, it is essential that an inspection be properly scoped and planned to allow for efficient use of time and to insure that all aspects of the facility which should be evaluated are inspected. Of course, there will be instances in which insufficient time will be available to an inspector for the complete preparation described here. Even on those occasions, the inspector should make every effort to engage in as many preparatory activities as possible.

The inspector's objectives in preparing for an inspection should include the following activities, all of which are described in greater detail in this chapter:

- **Determining the scope and objectives of an inspection**
- **Coordinating inspection activities with other regulatory or enforcement personnel as necessary**
- **Developing a thorough understanding of the technical, regulatory, and enforcement aspects of a facility**
- **Developing a plan or strategy for conducting an inspection consistent with inspection objectives**
- **Determining health and safety requirements and equipment needs.**

Exhibit 2-1 below identifies and summarizes the key steps in inspection preparation.

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Exhibit 2-1
Inspection Preparation Summary

Manual Section		Key Steps
2.2	Define Scope of Inspection	• Determine inspection objectives • Identify needed preparation and appropriate inspection activities
2.3	Coordinate/Schedule Inspection	• Identify any interested offices or agencies • Consult on an appropriate joint effort • Consult permit writer and compliance officer/attorney
2.4	Review Facility File	• Review facility files, including permit/ enforcement files • Develop and maintain facility file as necessary
2.5	Review Applicable Regulations	• Identify and review applicable regulations, as determined through file review • Obtain/understand relevant amendments to the RCRA standards
2.6	Develop Inspection Plan and Checklist(s)	• Develop a brief plan on how to proceed during the inspection and highlight key site-specific issues that need to be resolved • Review existing checklists and determine their usefulness • If needed, develop facility-specific checklist • Determine how to notify the facility of the inspection, if appropriate
2.7	Identify Needed Inspection Equipment	• Identify/obtain necessary inspection equipment based on type of inspection, kind of facility, Regional/state policy • Determine health and safety requirements
2.8	Complete Pre-Inspection Worksheet	• Complete Pre-Inspection Worksheet

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2.2 Defining the Scope of an Inspection

When planning an inspection, it is critical that the inspector first define its scope. Generally, the purpose and objectives of an inspection determine its scope. For example, the scope of a routine CEI will differ from the scope of an inspection performed to assess facility compliance with permit deadlines.

Inspectors can most easily determine the purpose and objectives of an inspection through discussions with supervisory or other enforcement personnel, such as an enforcement compliance specialist.

Typically, the purpose of an inspection will be one of the following:

- A routine periodic assessment of RCRA compliance
- A review of facility activities or status with respect to an enforcement action
- A review of facility compliance with deadlines set forth in its RCRA permit
- A response to information received concerning alleged violations at the facility
- Identification of vehicles for cross-program compliance.

Routine compliance inspections are generally broad in scope. However, inspections performed for other purposes (e.g., compliance with an enforcement order) are composed of activities not typically performed during a routine CEI, such as:

- Comprehensive records review
- Data evaluation/verification
- Waste or media sampling.

If inspectors do not need to generate the kinds and amount of information normally collected during a comprehensive investigation, they should conduct a more narrowly-focused inspection that will be a more efficient use of resources. However, even if inspectors anticipate conducting such a narrowly-focused inspection, they should be prepared to conduct a more comprehensive inspection if, once on-site, they determine that conditions so require.

To properly prepare for an inspection, inspectors should determine:

- The offices or agencies with which the inspection should be coordinated
- The facility information which should be focused upon

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- The regulations and enforcement documents that should be obtained and reviewed
- Whether sampling will be required during the inspection.[2]
- Whether it is appropriate to notify the facility in advance of the inspection.

☞ **An inspector must have as clear an understanding of the scope of an inspection as possible, derived in part from communications with his or her supervisor or other enforcement personnel, as appropriate to the Region or state.**

[2] Preparing for sampling during the inspection is not within the scope of this Manual; inspectors should refer to the RCRA Technical Case Development Guidance Document, OSWER Dir. 9938.3, 1988.

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2.3 Coordinating an Inspection

Inspectors should identify the other offices within their agency and in sister federal, state, or local agencies that may be interested in the results of, or participating in, an inspection. They can accomplish this by consulting with their supervisor and considering the scope and nature of a proposed inspection. After making a determination, an inspector should contact the appropriate offices or agencies to inform them of his or her proposed effort and/or to coordinate the inspection.

Coordination can be highly beneficial to inspectors and those offices or agencies with which coordination is attempted. Other offices or agencies may be interested in an inspection for several reasons:

COORDINATION	
Reasons for Coordination	**Possible Coordination Activities**
• Other office may be pursuing a planned action that might be interfered with by the inspection or enhanced through coordination • Offices may be able to share resources and information or conduct concurrent multi-media inspections • The inspection may provide incidental information or identify cross-program compliance issues that would be useful to another office in their regulatory or enforcement activities (e.g., an inspection at a facility with a NPDES-permitted wastewater treatment facility may be of special interest to the office responsible for water enforcement) • The inspection is being performed, in part or exclusively, at another office's request (e.g., an inspection performed to verify permit application information or to support an enforcement action) • Another office shares jurisdiction for RCRA enforcement at the facility, making the scheduling of a joint inspection desirable (e.g., where a state agency has partial authorization for some units at a facility, and the remaining units are subject to EPA enforcement).	• Scheduling joint inspections with other offices or agencies • Scheduling an inspection to avoid interference with planned activities of other agencies or offices • Conferring with other offices or agencies to insure that the inspection satisfies their information needs • Obtaining relevant information on the facility's administrative or enforcement status, such as pending enforcement actions under RCRA or other environmental programs • Clarifying for a requesting office the scope of an inspection and areas of particular interest to that office • Clarifying with a permit writer permit conditions or the status of a facility's permit application • Obtaining technical information on a facility from a permit writer • Obtaining facility information from other agencies • Working to further the goals of a Memorandum of Understanding that may exist between Regions and states, explaining coordination protocols.

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Federal inspectors may find state and local agencies to be good sources of information about a facility. For example, some states maintain waste manifest records or histories that are useful in preparing for an inspection. Similarly, state inspectors may find the Regional EPA office has useful information about a facility obtained prior to state authorization or for other purposes (e.g., the NPDES program).

Inspectors, or their supervisors, should confirm that all appropriate people have been contacted to prevent interference with planned, ongoing activities and to insure efficient use of inspection resources.

Permitted Facilities

Inspectors should contact the responsible permit writer before inspecting facilities that have applied for or received a permit. If the facility's permit application is undergoing review, the permit writer and the application will usually provide valuable information about the facility and, alternatively, the permit writer may have information needs that inspectors can fulfill during an inspection (e.g., verifying completion of facility modifications reported by the permit applicant). <u>If a facility has received its permit, the permit imposes site-specific requirements that are subject to enforcement and should be evaluated during the inspection</u>. In addition, the permit writer may be able to identify suspected problem areas at a facility. Preparing for an inspection at permitted facilities is discussed in greater detail in Chapter 3 of the Manual.

Enforcement Actions

If an inspector is conducting an inspection to support an enforcement action (e.g., to determine if a facility has come into compliance with the terms of an enforcement order), he or she must coordinate the inspection with the appropriate compliance officer or attorney assigned to the action. Those individuals will be able to explain the specifics of the action and identify important areas for review at the facility. Inspectors should advise the attorney or compliance officer of the time and date of an inspection, and obtain their phone numbers so that they can be contacted from the field if an inspector needs to confer on specific aspects of the inspection.

☞ NOTE: Inspectors must make any calls from the field to an attorney or compliance officer confidentially, preferably from an off-site phone, and should give no indication to the owner/operator that a conference has occurred.

Inspectors should also determine, with guidance from the compliance officer or attorney, how to submit inspection results. Normally, inspection results are submitted in an inspector's report (discussed in Chapter 5 of this Manual); however, results can be "fast tracked" to the requesting office to expedite response actions.

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2.4 Reviewing a Facility File

Regional and state RCRA program offices generally have one or more existing files for each facility within their jurisdiction and/or may make information on a facility available through an automated data processing (ADP) system, such as the RCRA Information System (RCRIS). Inspectors should make full use of all such available information in preparing for an inspection.

Inspectors should review facility file information to:

- Develop a thorough technical understanding of a facility, including the wastes managed, the waste management units used, and the processes which generate and treat wastes
- Develop an understanding of the compliance history of a facility, including past violations, facility efforts to correct compliance problems, and potential violations that may not have been remedied
- Identify, based on citizen complaints or inconsistencies in file materials, potential violations to be evaluated during an inspection
- Determine applicable regulations for review (see Section 2.5 below)
- Support development of the inspection plan for a facility (see Section 2.6 below).

NOTE: In many Regions and states, one program office is responsible for all RCRA activities (e.g., permitting, inspections, and enforcement) and will have a central program file for each facility within its jurisdiction. However, responsibility for permitting, inspections, and enforcement may be split among several offices and separate files may be maintained by these offices. The information in each of these files may vary as they are developed for different purposes. Inspectors will, ideally, review all potentially relevant files. Coordination between the Region and state is important to ensure that all applicable files are reviewed. Coordination is particularly important in states authorized for part, but not all of the federal RCRA program.

Updating/Developing a Facility File

In general, the office responsible for RCRA inspections should have a central inspection file on each RCRA facility. Inspectors should maintain the central inspection files on each RCRA facility within their respective areas of responsibility, updating the files as new information becomes available (e.g., the results of recent inspections). If inspection files are not part of a central program file, maintaining a file may require periodically reviewing and obtaining new data from files held by the offices responsible for permitting, enforcement, or other activities in the EPA Regional office and/or state agency. Before an inspection, inspectors should review the inspection file to determine the adequacy and timeliness of information in the file, and obtain additional or updated information from other offices as appropriate. This activity can be performed when coordinating the inspection, as discussed in Section 2.3 above.

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Exhibit 2-2 below describes the minimum contents of an inspection file.

NOTE: A facility's Part A application, Part B application, and/or permit will provide some of the information listed in Exhibit 2-2, including a plot plan or map and, possibly, a flow chart or illustration showing processes and design features. Part B permit applications and final permits may be lengthy documents which may not be convenient to duplicate for the inspection file if they are already maintained in the files of another office. It may be more efficient and convenient to note in the central inspection file where these documents are maintained and how they may be obtained for review by inspectors (e.g., the point-of-contact for obtaining the document, such as the permit writer). Inspection planning for permitted facilities is discussed in greater detail in Chapter 3 of this Manual.

When inspecting a manufacturing plant, inspectors may want to obtain additional information on the types of processes used at the plant to better understand plant activities once on-site. Several EPA documents and other standard references on industrial processes are available for this purpose and are listed in Appendix V of the Manual.

Reviewing Facility Enforcement Documents

Where the purpose of an inspection is to support an enforcement action (e.g., to evaluate facility progress in meeting compliance deadlines set forth in an enforcement order), inspectors should obtain all applicable documents from the enforcement office, compliance specialist, legal counsel, or other appropriate office or official. Generally, inspectors should obtain these documents while attempting to coordinate an inspection, as discussed in Section 2.3 above.

Inspectors should review enforcement documents to determine:

- Specific activities or units of interest at a facility
- Specific non-complying conditions or violations
- Specific activities a facility is required to have performed or be performing to come into compliance
- The compliance schedule and intermediate milestones towards completion of required activities.

Knowing these items is important in determining the applicable regulations that must be reviewed (Section 2.5 below), and the appropriate strategy for inspecting a facility and developing an inspection plan (Section 2.6 below).

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Exhibit 2-2
Contents of an Inspection File

- **A summary of names, titles, locations, and phone numbers of the responsible persons (operators, plant officials, municipal officials, etc.) involved in the facility's hazardous waste program (in many cases, this information may be incorporated into the Regional or state ADP system to facilitate contacting the facility)**
- **A flow chart or other illustration showing processes used and design features of present and planned units and processes at the facility**
- **For treatment, storage, and disposal facilities (TSDFs), a list of the wastes that are treated, stored, or disposed of by type of management**
- **For generators, a list of the wastes generated, including their origin**
- **Inspection reports, including photographs, from previous state or Regional inspections**
- **A compliance history of the site, including a listing of any past compliance or enforcement actions, the current status of any such actions, and copies of correspondence relating to the actions**
- **Biennial, annual, and other reports submitted by the facility to the state or Region, including the most recent monitoring reports, where applicable**
- **Previous EPA studies, consultant's reports, and laboratory reports**
- **Citizens' complaints filed against the facility**
- **A detailed map or plot plan showing the facility layout and location of waste management units, and any available sketches or drawings of the waste management units**
- **Records of any phone conversations with facility representatives**
- **The letter of notification of inspection sent to the facility and any response (if the facility has been notified)**
- **The facility's RCRA Notification Form**
- **The facility's RCRA Part A Permit application (for TSDFs)**
- **The facility's RCRA Part B Permit application (for certain TSDFs)**
- **The facility's final RCRA permit (for certain TSDFs).**

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2.5 Reviewing Applicable Regulations

Inspectors should obtain and review all federal and state regulations governing operations of a facility that is to be inspected. In most cases, inspectors will be able to determine which regulations apply to a facility, based on information in the facility file. In some cases, they will need to contact an attorney or other enforcement personnel for assistance.

It is important that inspectors use the most current versions of regulations when reviewing applicable standards. Federal RCRA standards are published in their entirety annually in Title 40 of the Code of Federal Regulations. Amendments to the federal standards promulgated periodically during the year are published in the Federal Register, which is published daily. Inspectors can obtain copies of new or recently promulgated regulations from their enforcement office or from the Regional or state legal counsel. Information on recently published amendments, and answers to questions regarding the RCRA standards, can be obtained from the RCRA-Superfund Industry Assistance Hotline at the following number:

☞

RCRA /SUPERFUND INDUSTRY ASSISTANCE HOTLINE
1-800-424-9346

Approaches for keeping up with the changes in RCRA regulations and obtaining recent amendments to federal standards are discussed in detail in Appendix I of this Manual.

Inspectors should be aware that changes in regulations, which may have occurred following a previous inspection of a facility, may change the compliance status of that facility. Activities which may previously have been consistent with applicable standards may not meet current standards. Thus, the results of previous inspections, usually recorded on checklists, should be critically reviewed in light of any known regulatory changes.

Inspectors should understand, to the extent possible, the intent underlying and interpretation of applicable standards, so as to evaluate situations that may require refined knowledge of the standards and to answer as fully as possible facility representatives' questions regarding the regulations. If inspectors have questions concerning regulatory intent or interpretation, they can obtain answers through:

- Discussion of the regulation with other inspection personnel, a supervisor, or compliance personnel

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- Discussion of the regulation with Office of Regional Counsel or Headquarters personnel

- Review of the preamble material that accompanies regulations published in the Federal Register

- Review of policy or technical guidance—RCRA/Superfund Industry Assistance Hotline can identify specific applicable guidance available from EPA.

In general, the first of these alternatives is the most efficient, as it allows inspectors to answer questions without obtaining and reviewing a large volume of material.

Some state and Regional offices have developed a process for institutionalizing the development of specialized regulatory expertise among inspection staff to allow for expedient in-house response to questions. This approach divides responsibility for maintaining current knowledge of RCRA standards among the inspection staff by subject area (e.g., landfills, incinerators). For their respective subject areas, the inspection personnel are required to understand the interpretation and intent of existing regulations, and to track and understand changes to the regulations as they are made. **Even where such a system is in place, inspectors with specialized regulatory expertise should be aware of all regulatory changes and review the applicable material before conducting an inspection.**

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2.6 Developing Facility-Specific Inspection Plans and Checklists

Once inspectors have determined the scope of an inspection, discussed the inspection with relevant personnel, and reviewed all background information and standards relevant to the facility, they should prepare a brief plan for inspecting the facility.

Generally, an inspection plan does not need to be elaborate or formal, or conform to any particular format (unless the Region or state has specific inspection plan requirements); rather, the plan should be prepared in accordance with the preferences of the individual inspector in a way that will make it most useful to her or him. The inspection plan is usually used only by the inspector to help organize his or her thoughts on the inspection and prepare an inspection strategy.

As a general rule, in preparing inspection plans, inspectors should:

- Outline the steps they will take once on-site
- Highlight any particular questions the inspection should address.

Inspectors should consider the following issues in preparing an inspection plan:

- **Should they notify the facility prior to the inspection or will inspection objectives best be met by performing a "surprise" inspection?**
- **How should they proceed upon entry to the facility? Should they conduct an opening conference to discuss the purpose of the inspection with facility representatives immediately upon entry, or first proceed with a visual inspection of certain operations or units at the facility (before the owner/operator may have time to stop or conceal possible violations)?**
- **When should they conduct an opening conference, if at all? What topics should they discuss with facility representatives during an opening conference?**
- **What facility records should they focus on, as suggested by their facility file review and any enforcement actions being undertaken?**
- **What route through the facility, or order of inspection, should they follow? To what should they pay particular attention during the inspection of individual units (e.g., compliance with requirements of an enforcement action)?**
- **What hazardous wastes may they encounter? With what safety equipment, safety guidance and practices (e.g., OSHA), and facility-specific safety regulations (if the facility is being notified of the inspection) should they become familiar?**

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Approaches to conducting an inspection are discussed in Chapter 4 below, which provides details on performing the activities listed above.

As part of the planning process, inspectors should determine which checklists to use, if any, for assessing facility compliance with RCRA standards. Sample checklists are provided in Appendix IV of this Manual; inspectors may use these checklists, or checklists which have been developed for their use by their Regional office or state agency, to the extent they prove helpful. Inspectors should review checklists while planning for an inspection to familiarize themselves with the information required, and update the checklists to reflect requirements of enforcement orders, amendments to regulations, or state-specific standards. When inspecting permitted facilities, inspectors should develop facility-specific checklists that address permit requirements. Preparing for the inspection of permitted facilities is discussed in Chapter 3 of the Manual.

Notifying a Facility

Notifying a facility prior to an inspection may or may not be appropriate, depending upon the following factors:

- The purpose of the inspection and inspection strategy
- Regional or state policy concerning notification
- Whether an inspector suspects that a facility is engaged in illegal dumping or other illegal (particularly criminal) activities
- The length of time the inspection is expected to require. Long inspections of complex facilities may require a substantial amount of facility workers' time. It may be desirable to schedule long inspections with the facility to insure that facility staff are available, unless the purpose of the inspection requires surprise.

For example, depending on Regional or state policy, it may be appropriate for inspectors to notify a facility of routine periodic compliance inspections when the facility is not expected to have significant violations (e.g., based on past inspections) and an inspector needs to speak with specific facility personnel. Generally, it will not be appropriate to notify facilities in advance of inspections if violations are known or suspected to exist, where the purpose of the inspection is to support a specific enforcement action, or where a "cover-up" is anticipated. Inspectors should consult with their supervisors and responsible compliance officers or attorneys if they have questions concerning whether to notify a facility of an inspection.

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Possible Methods of Facility Notification

- An annual notification letter which establishes the authority for inspections without specifying an inspection date
- A specific inspection letter sent out a month prior to an inspection as to inform the facility that an inspection will be conducted within a month
- An advance phone call to a facility to notify its staff of the inspection date, making appointments to see particular personnel.

These methods may be used alone, or in combination, as required. Inspectors should always, when notifying a facility, identify themselves and the organization or agency they represent.

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2.7 Identifying Inspection Equipment

Inspectors will select equipment to take into the field depending on the kind of inspection they plan to perform and the type of facility that will be inspected. Inspectors should use their knowledge of the facility, understanding of inspection objectives, training, and experience to decide which equipment is necessary for a particular inspection. Inspectors may wish to consult with other inspection personnel or their supervisor to determine equipment requirements. They should also consider Regional or state policies and conditions when selecting equipment during inspection planning.

Exhibit 2-3 below is a list of equipment that is commonly used in performing inspections. Inspectors may not need all of the equipment listed for every inspection; on the other hand, they may need equipment not specified on the list for some inspections. The list is divided into four categories of equipment: general equipment, safety equipment, sampling equipment, and paperwork.

Determining Health and Safety Requirements

Although routine inspections generally do not involve activities in which inspectors must physically contact hazardous wastes (except inspections involving sampling, during which incidental contact with wastes may occur), **there is always the potential for inspectors to be exposed to hazardous wastes or substances during the course of an inspection**. Therefore, in planning an inspection, inspectors should:

- Determine the nature of the chemical hazards that may be encountered during the inspection (based on the types of materials handled on-site)
- Identify and obtain proper safety equipment
- Become familiar with the proper use of safety equipment, check equipment to ensure proper functioning, and perform necessary maintenance on the equipment (if appropriate and within the technical abilities of the inspector)
- Obtain and become familiar with all applicable safety guidance and practices—information on EPA directives on safety and health, and on Occupational Safety and Health Administration (OSHA) standards for hazardous waste facilities, is provided in Section 1.5 above
- Determine any facility-specific safety requirements by contacting the facility (only in cases where the facility is being notified of the inspection) or by reviewing previous inspection notebooks.

As noted above, the inspection equipment list in Exhibit 2-3 cites health and safety equipment that may typically be required in performing routine compliance inspections. In many cases, facilities may require that an inspector have standard safety equipment listed on the checklist. Inspectors should use Exhibit 2-3, in conjunction with information about the chemical hazards at the facility and applicable EPA guidance and OSHA requirements, to select appropriate health and safety equipment for performing an inspection.

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Exhibit 2-3
List of Inspection Equipment

GENERAL EQUIPMENT	
• Camera, film, and flash equipment • Pocket calculator • Tape measure • Clipboard • Waterproof pens, pencils, and markers • Locking briefcase • "Confidential Business Information" stamp (if needed) • Stamp pad • Envelopes pre-addressed to Document Control Officer (for CBI) • Plain envelopes • Polyethylene bags	• Disposable towels or rags • Flashlight and batteries • Pocket knife • Pocket tape recorder • Level • Range finder/optical tape measure • Compass • Stopwatch • Wind meter or Admiral Beaufort wind scale • Square • Ruler (for use as scale in photos)
SAFETY EQUIPMENT	
• Safety glasses or goggles • Face shield • Ear plugs • Coveralls, long-sleeved • Hard hat • Plastic shoe covers (disposable)	• Rubber-soled, metal-toed, non-skid shoes • Liquid-proof gloves (disposable if possible) • Long rubber apron • Respirators and cartridges • Self-contained breathing apparatus
PAPERWORK	
• Proper identification • Copy of facility's inspection file, permit, and monitoring schedule, including: - Maps - Photographs - History of enforcement actions • Notebook • Notice of inspection (if applicable) • Chain of custody record	• Relevant checklists • Code of Federal Regulations or applicable state code • EPA Regional or state forms for: - Inspection confidentiality notice - Enforcement actions notice - Declaration of confidential business information - Receipts for documents and samples • Field data sheets
SAMPLING EQUIPMENT	
• Bucket auger • Bucket • Containers - Jars - Plastic (for metals) - Organic sample containers • Bailers • Pumps	• Conductivity meter • Thermometer • Dissolved oxygen meter • Steel tape measure • Sampling safety equipment (in addition to equip. on the Safety Equip. list above) - Tyvek suit - Booties - Gloves

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Exhibit 2-3 (Continued)
List of Inspection Equipment

SAMPLING EQUIPMENT (continued)	

• Rope
• Glass tubes
• Ice
• Scoops
• Trowels
• Bacon Bomb
• Tape
  - Labelling
  - Duct
  - Electrical
	Safety Equipment (Cont'd)
	  - Harnesses
	  - Chemical resistant suit
	  - Organic Vapor Analyzer (OVA)
	• Decontamination equipment
	  - Buckets
	  - Alconex
	  - Brushes
	  - Grate
	  - Deionized water
	  - Solvents for equipment cleaning
	  - Steam cleaning machine
	  - Plastic bags

In some cases, inspectors will have limited information about a facility, or may be inspecting an uncontrolled site. Inspectors should be prepared to encounter the worst conditions in such cases.

Inspectors should never proceed with inspections involving site conditions for which they are not prepared and do not have the proper safety equipment.

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2.8 Completing a Pre-Inspection Worksheet

A pre-inspection worksheet, set forth in Exhibit 2-4, can serve as:

- An internal check on performance of all necessary pre-inspection activities
- A planning tool to enable the inspector to perform pre-inspection activities more effectively.

Exhibit 2-4 is designed to insure that, at a minimum, inspectors have identified, assembled, and reviewed all relevant materials prior to departure for an inspection. Proper preparation for an inspection, as documented by completion of the worksheet, helps to insure that the inspection will be performed efficiently and will meet all objectives. Since Regional and state inspection needs, objectives, and procedures may vary, this worksheet is intended only as a guide and should be modified to reflect and incorporate the specific needs of each inspector. **It is strongly recommended that all inspectors use the following pre-inspection worksheet or a modified version.**

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Exhibit 2-4
Pre-Inspection Worksheet

TASK COMPLETED	DESCRIPTION OF ACTIVITY
	Contact/Coordinate with other offices and agencies -- -- --
	Complete/verify the general information section of the inspection report
	Identify and Obtain All Relevant Information:
	Manifest history
	Notification form
	Part A permit application
	Previous inspection reports
	Correspondence
	Part B permit application (if available)
	Annual reports
	Final Part B permit (if available)
	Enforcement documents
	Other
	Assemble Inspection Package:
	Notification form
	Part A permit application
	Previous inspection reports
	Waste generation and characterization information
	Information from air and water pollution control agencies or offices
	Inspection checklists
	Copies of state statutes and regulations or Federal laws and regulations
	General inspection equipment (e.g., camera and film)
	Safety equipment
	Paperwork
	Agency identification card
	Sampling equipment (if necessary)
	Other
	Scheduling the Investigation:
	Letters of intent to visit/inspect
	Establish date(s) of the inspection
	Follow-up telephone call to confirm date(s) of the inspection and to request
	that additional information be made available at time of inspection
	Complete inspection plan
	Notify interested agencies of EPA staff schedule
	Other

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2.9 Summary

Adequate preparation for an inspection is an essential ingredient for fulfilling inspection objectives, regardless of the type of inspection being performed.

In this chapter, inspectors have been presented with information and approaches that should assist them in their preparations. These are only suggestions but inspectors are strongly advised to at least consider the material here and adopt portions of it for their own use.

Key Steps in Preparation

- Define the inspection's scope
- Coordinate the inspection with all interested offices
- Review existing files on the facility to be inspected
- Develop an up-to-date inspection file
- Review all applicable regulations, enforcement documents, and permits
- Prepare a facility-specific inspection plan
- Identify and obtain all necessary inspection equipment
- Complete a pre-inspection worksheet.

Once inspectors have completed the above steps, they will be ready to conduct an effective inspection.

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3.0 Developing Permit-Specific TSDF Inspection Plans

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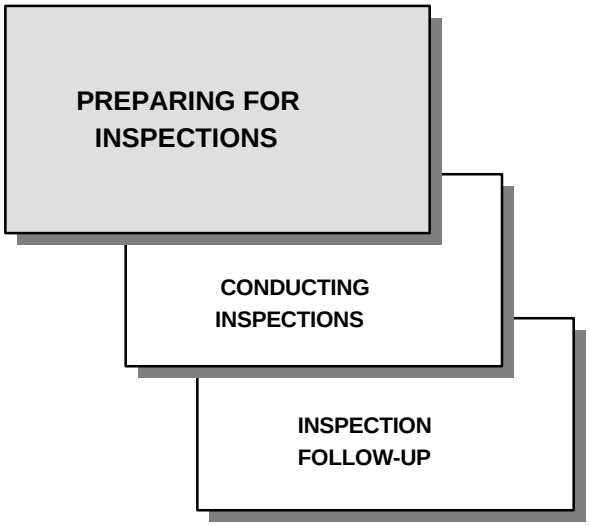

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3.1 Introduction

This chapter describes methods for **developing site-specific inspection plans and checklists for permitted facilities. Generic checklists will generally not provide much assistance.** Such checklists, which cover the various 40 CFR Part 265 requirements, are useful for conducting interim status inspections. Generic checklists are also "efficient" in that they are equally applicable to all facilities, but facility-specific conditions (e.g., those imposed through orders and consent decrees) will often require that a generic checklist be supplemented in some manner.

A site-specific checklist can guide less experienced inspectors through a facility and serve as a reminder to more experienced inspectors. While creating site-specific inspection plans may seem to be inefficient, especially given the length of a permit and its associated attachments, developing such inspection plans offers several advantages to the compliance and enforcement program. Among these advantages are the opportunity for inspectors to immerse themselves in a facility's operations and understand the relationship of those operations to subsequent permit conditions. The fact that permit conditions are site-specific forces inspectors to understand facilities in greater detail than might otherwise be necessary. This, in turn, should result in more thorough inspections.

The cost of inspection planning for permitted facilities will be greater than that associated with the inspection of interim status facilities. The mere size of RCRA permits attests to the potential magnitude of the permitted facility inspection effort. An experienced inspection staff will help reduce this cost. The graduation of facilities from interim to permitted status also puts a premium on retaining experienced staff.

Alternative Approaches to Permit-Specific Inspection Plans

This chapter does not endorse any single approach to developing facility-specific inspection plans. Two "models" for developing facility-specific plans are presented below; inspectors and their supervisors may choose either model or combine them in some manner:

- ***Checklist:*** **This approach involves developing a checklist similar to that used for interim status inspections <u>but based on permit information rather than 40 CFR Part 265</u>. Inspectors need to review permit files, identify those conditions that can be inspected readily, and use this information as a basis for developing a checklist. A checklist can be inclusive of all conditions, or focus on specific conditions. An all-inclusive checklist may be designed to be used for all subsequent inspections, whereas a focused checklist may only be useful for a single case development inspection. Alternatively, the all-inclusive checklist can comprise several sections (e.g., the waste analysis plan action) that may be selected for use when a focused inspection is necessary.**

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- ***Permit Information Summary Sheets:*** **The information summary sheets model differs from the checklist model in that it provides inspectors with only the most basic facility information and a list of key points or concerns that need to be covered during the inspection (e.g., concerns about possible releases from one of the facility's units, or past compliance problems). The summary sheets may describe the number of facility units, both regulated and non-regulated, their status (operational, closing, closed) and waste generation and handling. Since the summary sheets provide only limited information, inspectors will need to become familiar with a site through some means such as review of records. One disadvantage of using an information summary sheet is that the facility inspection probably will not allow for verification of a facility's compliance with every aspect of its permit. Use of a summary sheet requires the exercise of greater judgment on the part of inspectors, and may be inappropriate for less experienced ones. Despite these shortcomings, the summary sheets still represent an attractive alternative, as inspectors can concentrate their efforts on: 1) assembling a detailed and exact list of concerns upon which an inspection will be based, and 2) applying their knowledge and experience in investigating each of the identified concerns.**

In choosing either approach, inspectors and their supervisors should consider several factors:

- The purpose of the inspection
- The complexity of the facility
- The experience of an inspector.

In any case, the selected technique should be geared towards making the goals of the inspection more attainable.

Assembling Pertinent Materials

As discussed in Chapter 2 above, inspectors must identify and make use of all information sources in developing a protocol. Perhaps the best sources of information are other agency/state officials familiar with a particular facility. They may assist in determining the major areas of interest at the facility, such as potential release points and past compliance problems. In addition, these officials should be able to assist inspectors in determining whether documents in addition to those contained in a permit may be useful in developing a complete picture of a facility.

Other information sources include:

(1) **A Facility's RCRA Permit and Permit Application** — The permit contains most of the site-specific conditions and requirements that a facility must meet to be in compliance. If conditions of the facility permit are found to be inconsistent with the regulations, the permit may serve as a shield for the facility.

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The content of a facility permit takes precedence over any language contained in a facility's Part A or Part B permit application.

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The RCRA permit is generally composed of a series of modules containing each of the following:

- A general facility description
- Standard conditions
- General facility conditions
- Unit-specific conditions and requirements
- Detection monitoring requirements
- Compliance monitoring requirements
- Corrective action for regulated units
- HSWA corrective action for solid waste management units
- Post-closure requirements.

In general, these modules closely track the regulations, but a variety of styles may be encountered. For example, some permits may have all inspection requirements, or all reporting requirements, cited in one place. A different format may also result when state requirements extend beyond the federal RCRA requirements. Inspectors are encouraged to discuss the contents of a permit with the permit writer prior to file review.

In reviewing the body of a permit, inspectors will find that numerous references are made to the permittee's RCRA Part B permit application, and that specific portions of the application are incorporated by reference. **Inspectors should be aware that the descriptions, procedures, and protocols that are referenced in this manner are enforceable permit conditions**. This means that an inspector cannot rely solely on the main body of the permit, but must also consult the referenced attachments. Inspectors should note that the public hearing process, prior to permit issuance, may result in changes being made to the submitted information. These changes are documented as part of the permit's administrative record.

In some cases, inspectors will find that **facilities have been issued more than one RCRA permit.** These permits may have been written at different times and may regulate different units at the facility. It is also possible that one permit was issued by a state authority and another by EPA. These situations arise if states lack the authority to impose certain requirements, such as HSWA corrective action requirements. In such cases, the EPA-issued permit will cover only the HSWA requirements. Nonetheless, the facility will have to meet both state and federal requirements. Federal inspectors may coordinate with state inspectors in conducting a complete review of the facility. Alternatively, federal inspectors can focus their attention on the federal requirements, leaving state inspectors to assess facility compliance with state requirements.

(2) **Orders and Consent Decrees** — Any orders or consent decrees issued to a facility will be important to inspectors since they contain specific provisions with which the facility must comply. **Where inconsistencies arise between a permit and an order/consent decree, the order/consent decree will take precedence.**

(3) **RCRA Regulations** — Although, in some instances, permits will not reflect new regulations promulgated since the permit's original issuance, the facility still needs to comply with these requirements. Indeed, EPA has determined that many regulations are self-implementing and do not require specific permit language to be enforceable. Specific examples include the land disposal bans, double liner

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requirements for surface impoundments, and the prohibition of liquids in landfills. In addition, as new wastes are listed as hazardous, or new characteristics are promulgated, additional wastes at a facility may be deemed hazardous. By knowing a facility's production processes, inspectors may be able to identify additional requirements with which the facility will need to comply.

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3.2 Developing An Inspection Protocol

This section presents guidelines for developing an **inspection protocol**. In addition, it provides a series of examples of how an inspector may consider permit conditions in developing a protocol. This section is divided into four separate subsections addressing: 1) general guidelines, 2) overall site orientation, 3) releases, and 4) "other" permit conditions.

General Guidelines

Inspectors must follow a **consistent and logical strategy** for developing inspection procedures to be followed at a particular facility. The strategy should focus on the specific purpose of the inspection at hand, and be sensitive to the fact that inspectors have a limited amount of time to prepare for and actually conduct inspections. Depending on time constraints, inspectors may not be able to verify a facility's compliance with every applicable regulatory provision (e.g., measurement of aisle space). As a result, inspection priorities may need to be set. In other instances, inspectors may have time to conduct a detailed review of all applicable requirements.

A checklist is one tool for conducting an inspection; complete reliance on a checklist as a means of preparing/conducting inspections is not recommended. Inspectors have to make individual judgments about the value of checklists.

Information protocols should be developed in accordance with the following basic principles:

- Where possible, questions should be phrased to allow for a "yes" or "no" answer, with affirmative answers being indicative of good/compliant conditions. This allows reviewers to easily focus on problem areas.

- Questions should be as specific as possible. Ambiguity in checklist language may cause problems in making final compliance determinations. Questions with multiple components should be avoided so that "no" answers refer to a single specific provision or requirement.

While developing an inspection protocol, inspectors should review the final RCRA permit and any pertinent attachments to that permit. A draft permit may exclude pertinent changes to the permit conditions.

Overall Site Orientation

This subsection discusses the development of a general site orientation based on information contained in a permit. **Inspectors should not visit a site without first understanding the general site settings.** Inspectors must understand a facility's layout and general operation to:

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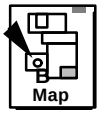
- Establish credibility in the opening conference
- Conduct an organized walk-through of the facility
- Ensure that appropriate safety precautions are taken
- Sharpen the focus of the compliance review.

Inspectors should review all relevant documents to develop a fact sheet on general operational characteristics of a facility. The fact sheet should contain the following:

Suggested Fact Sheet Contents

- **A description of the facility's physical boundaries**
- **The types and locations of waste management units that are covered by the permit**
- **The status of each permitted unit (e.g., under construction, under corrective action, operational, being closed, closed)**
- **Ground-water monitoring well locations**
- **A description of the processes that generate wastes**
- **A description of the types and characteristics of wastes being stored, treated, or disposed in the waste management units.**



Obtaining a **facility map** may be the most important action inspectors can take prior to a site visit. A correctly-prepared map should detail a site, inclusive of labels identifying regulated units, non-regulated units, and ground-water monitoring well locations. Exhibit 3-1 contains an example of a correctly-prepared map. The information that inspectors can obtain from a map when developing a checklist or information sheet include:

- The facility's physical boundaries
- Location and number of each type of waste management unit
- Location of ground-water monitoring wells.

Often, a permit may reflect waste management units that are proposed or still under construction, as illustrated in Exhibit 3-1. Using a map as a guide, inspectors can determine unit operational status during site visits.

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Exhibit 3-1
Map of ABC Manufacturing Facility

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The map of a facility may not distinguish permitted units from unpermitted ones. Inspectors should be able to make this distinction by using information found in the initial pages of a permit.

EXAMPLE

The container section of ABC Manufacturing's permit reads as follows:

Conditions Related Solely to Storage in Containers
1. The permittee is authorized to store the following maximum quantities of hazardous waste at the specified locations:
• B-10 Storage Area — 11,000 gallons
• T-559 Storage Building — 5,280 gallons
• B-96 Road Storage Area — 6,380 gallons.

If a map of the ABC Manufacturing facility, with corresponding location codes (e.g., B-10 Storage Area), is available, inspectors should be able to develop questions directed at verifying certain permit conditions that focus on the general site orientation. For example:

> Are any wastes being stored in containers in locations other than the three specified in the permit? ____ Yes ____ No

For purposes of developing a general site orientation, inspectors need not produce a detailed protocol that lists all of the requirements of a permit. The following are examples of the requirements that can be disregarded for these purposes:

- Cracks larger than one-inch deep and one quarter-inch wide must be repaired within 24 hours of discovery
- Four feet of aisle space is required between rows of containers.

If experienced inspectors performing an inspection would detect such a crack, measure the crack's length and depth and, after the inspection, consult the facility's permit to learn if the condition requires maintenance.

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In developing a general site orientation, inspectors should review a facility's permit(s) to gain insight into process operations and wastes generated at the facility.

EXAMPLE

ABC Manufacturing's permit contains the following information:

GENERAL DESCRIPTION OF HAZARDOUS WASTE

Wastewater Treatment Sludge

This waste is a sludge which results from the treatment of process rinse waters (including some electroplating wastewater) and spent process solutions. This waste is stored in surface impoundments. ABC Manufacturing has submitted a delisting petition to the Bureau of Pollution Control for this waste. This petition was submitted April 7, 1986.

DESCRIPTION OF HAZARDOUS WASTE

WastewaterTreatment Sludge

EPA Waste Number: F006 (Wastewater Treatment Sludges from Electroplating Operations)

General Description: This material is a black sludge as collected in the surface impoundments. It dries to a light to medium brown color.

Composition of the material:

Chromium	0.1-1.0%
Chromium (VI)	ND
Nickel	0.2-1.7%
Zinc	1-2%
Iron	509%
Aluminum	1-1.5%

grit, and other insolubles from the manufacturing process.

This permit information should trigger questions such as:

- Does the waste match the general description?
- Is the electroplating sludge the only waste being discharged to the surface impoundment? ____ Yes ____ No

In this instance, an inspector using an information sheet may only need to note the type of waste stored in the surface impoundment and the visual characteristics. He or she can then call the Bureau of Pollution Control to determine the status of the waste and maybe verify additional ABC Manufacturing facility information not covered in the RCRA permit. During the site visit, the inspector can identify the process generating the waste, other wastes that may be entering the impoundment, waste transportation handling procedures, and other visual signs that signify a problem.

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For some industries, inspectors must carefully examine the process flow diagrams due to the unit-specific nature of the waste listing.

EXAMPLE

In reviewing the information from a petroleum refinery, inspectors may notice that the facility does not report generating any K051 waste, although most refineries do generate K051. Examination of the process flow diagrams may reveal that this facility is using a coalescing plate separator instead of the more widely used American Petroleum Institute (API) separator. Although the sludges from both types of separators are similar in composition, only the API separator sludge is considered a listed waste.

In sum, preparation of the site orientation portion of an inspection plan allows inspectors to learn the basics about a facility so that when they perform the inspection, any obvious or serious violations can be noted. Inspectors should be alert for unpermitted units and transporter and generation activities at a mostly-permitted facility.

Releases

The inspection of potential release points must be considered when developing an inspection protocol. If an inspection does not have a specific enforcement focus, and only limited time is available for the inspection, detection of actual or potential releases is an obvious priority. In addition, discovery of releases or potential releases may lead to the inspection of additional requirements, via either permit modifications or orders, that may be imposed on the facility. RCRA Facility Assessments (RFAs) are an ideal reference tool for reviewing actual and potential release points.

Many RCRA permits contain specific provisions for identifying and mitigating releases to the environment. Many of these permit provisions reference potential releases associated with deterioration of management units.

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EXAMPLE

The following language is found in ABC Manufacturing's permit:

Condition of Containers. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition. Any leakage shall be cleaned up immediately upon detection. The Permittee shall visually inspect the containers for degradation at least weekly and shall record the results of such inspections in the operating record.

Inspectors cannot easily inspect the first permit condition. They cannot tell whether ABC Manufacturing has had problems with containers in the past. However, the second permit condition, the weekly inspections, may aid in this determination.

Among questions that an inspector should ask related to ABC Manufacturing's permit and that are appropriate for inclusion on a checklist are the following:

Is ABC Manufacturing's container storage area presently free of spills? cracks?
____ Yes ____ No

Do records indicate containers are inspected at least weekly?
____ Yes ____ No

According to records, has ABC Manufacturing's facility been free of spills? cracks?
____ Yes ____ No

Note: Questions have been purposely worded so that any problems would be indicated with a negative response.

☞ **Warning signals** of a release or potential release from various units include:

- Rusty or deformed containers
- Poorly stacked drums
- Puddles around units
- Leaking valves on tank
- Strong odors from encapsulated units
- Dead vegetation
- Erosion

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- Dusty conditions around piles
- Any other indication that the unit is not containing the waste or is poorly managed.

Often, a determination of compliance with permit conditions cannot be made through a simple visual inspection. The following example relating to the ABC Manufacturing facility permit illustrates how inspectors may develop questions from permit conditions that are designed to address the above mentioned problem.

EXAMPLE

PERMIT CONDITIONS	INSPECTION QUESTIONS
"Pump all liquids out of the leachate collection and removal systems immediately after the Permittee determines liquids are present. "All liquids" means pumping out liquid so that only one inch remains in the collection sytem. Any leachate collection and removal system which generates more than 20 gallons of liquid in any calendar day shall immediately cease accepting wastes into the regulated unit. The Permittee must notify the Director in writing any time this criteria is exceeded. The Permittee is required to cease discharge of hazardous wastes into any surface impoundment and immediately implement emergency procedures whenever the level of liquids in the surface impoundment suddenly drops, and the drop is not known to be caused by changes in the flow into or out of the surface impoundment from normal operation."	Does the facility maintain daily records of daily leachate quantities collected? ____ Yes ____ No Do records indicate the facility has not exceeded releases of 20 gallons per day, every day? ____ Yes ____ No If not, did the Director receive notification of this event? ____ Yes ____ No Does the facility keep records of the liquid level in the surface impoundment? ____ Yes ____ No Does the facility maintain records of "normal" flows in and out of the unit? ____ Yes ____ No Do records indicate a sudden drop in liquid level? ____ Yes ____ No

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In certain circumstances, inspectors cannot evaluate whether a release has occurred unless some type of background levels or other criteria are provided.

EXAMPLE

ABC Manufacturing's permit provides as follows:

Corrective Action Requirements

As required in 40 CFR 264.100(a) and 264.101, the Permittee shall conduct corrective action whenever the concentrations of the following hazardous constituents in ground-water are in excess of the concentration limits listed below along the points of compliance (the [downgradient] boundary of each solid waste management unit).

Constituent	*Concentration Limit*	*Constituent*
Creosote	Presence or absence	Background
Cresols (total of o,m, & p-cresol)	1750 µg/l	ACL
Naphthalene	MDL	Background
Pentachlorophenol	0.20 mg/l	ACL
Phenol	3.5 mg/l	ACL
Fluoranthene	0.21 mg/l	ACL
Chrysene	MDL	Background
2,4-Dimethylphenol	MDL	Background
2,3,4,6-Tetrachlorophenol	350 µg/l	AC1

The ground-water concentration limits can be perfect inspection criteria, provided ABC Manufacturing is regularly analyzing the ground-water, as required. Inspectors should bring a summary of these concentration limits or similar permit conditions to inspections so that they can readily determine whether the facility is operating within ground-water limitations. Inspectors can use the summary in conjunction with questions they have derived from the permit conditions, such as:

Do analytical procedures conform to permit conditions?
____ Yes ____ No

Is the sample being collected at the location specified in the permit?
____ Yes ____ No

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Inspectors should be careful to note the units of measure (e.g., mg/l) in permit conditions and verify that a permittee is using comparable units in its analysis/reporting.

EXAMPLE

The results of the ground-water analysis mentioned in the previous example have been reported by ABC Manufacturing as follows:

Constituent	*Concentration Limit*
Creosote	Not Detected
Cresols (total of o,m, & fp-cresol)	3.5 mg/l
Naphthalene	Not Detected
Pentachlorophenol	0.02 mg/l
Phenol	2.1 mg/l
Fluoranthene	Not Detected
Chrysene	Not Detected
2,4-Dimethylphenol	Not Detected
2,3,4,6-Tetrachlorophenol	29 mg/l

At first glance, it could appear to an inspector that ABC Manufacturing's facility is in compliance with permit requirements, but a careful examination of the units of measure may reveal that 2,3,4,6-tetrachlorophenol is significantly above the permitted limit. This could happen because units specified in the permit are different from the units specified in the analytical results. The inspector may discover a lack of specified units for ground-water pollutant limitations. **Inspectors must pay close attention to this level of detail.**

Other Permit Conditions

As discussed previously, an inspection checklist can cover any or all permit conditions. This subsection provides examples of how to construct checklist questions that inspectors may find valuable through reference to permit conditions, and explains how each question may be useful to a compliance determination. While the intention of an inspection

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is to assist in a noncompliance determination, it is not expected that the inspection will necessarily result in such a determination without further investigation.

Three examples are provided, covering permit conditions in the following areas: waste analysis plan, unit-specific conditions for storage tanks, surface impoundments, and corrective action.

EXAMPLE

Waste Analysis Plan

All TSD facilities are required to submit a waste analysis plan as part of a Part B permit application that, when approved, becomes part of a facility's permit conditions. The plan characterizes hazardous wastes generated or handled by the facility, and outlines sampling procedures, analytical methods, constituents of concern, and reporting requirements.

Inspectors may learn from discussions with a permit writer/enforcement official that sampling and analysis problems consistently arose during ABC Manufacturing facility's interim status. The permit writer/enforcement official also found that the personnel conducting the tests, as well as the equipment used to conduct the tests, created persistent problems. As a result, the permit writer inserted permit conditions into ABC Manufacturing's waste analysis plan. These are noted below in Exhibit 3-2, along with sample checklist questions that could be derived from the permit conditions.

With reference to Exhibit 3-2, if Bill Jones and Julia Smith remain as ABC Manufacturing's chemists, their degrees have been previously verified and the correct response to questions 1 and 2 is "yes". Otherwise, inspectors should review the degrees of current personnel.

While affirmative responses suggest compliance with this condition, the fact that employees hold chemistry degrees does not necessarily indicate that they follow good sampling/analytical practices. As suggested in Exhibit 3-2, inspectors can fashion additional questions from the permit conditions to check on these issues.

However, the "as necessary" clause regarding AAS and the Graphite furnace cannot be verified easily. Similarly, whereas the laboratory's annual participation in the NPDES Quality Assurance Program may be verified, the fact that ABC Manufacturing uses QA/QC procedures "very similar" to those which appear in SW-846 does not allow for easy inspection.

The answers to the indicated questions may serve as rough indications of the adequacy of the facility's waste analysis plan. However, despite compliance with all of these conditions, that plan may still be inadequate. For example, the balances may have needed servicing earlier than the routine 6-month period.

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Exhibit 3-2
Waste Analysis Plan
Permit Conditions and Inspection Questions

PERMIT CONDITIONS	INSPECTION QUESTIONS
SAMPLING PERSONNEL The samples are taken under the direction of the Plant Environmental Chemist, who will keep a log of the sample and field notes (if any) in a bound notebook. Samples are labeled and numbered, then submitted to the laboratory with a sample request form. (The Environmental Chemist will have a Bachelor of Science Degree in Chemistry. Present Environmental Chemist is Bill Jones, III, who has a B.S. degree in chemistry from the State University, plus 7 years experience.)	1. Does the Plant Environmental Chemist have a BS or advanced degree in chemistry? ____ Yes ____ No
LABORATORY PERSONNEL All samples are submitted to ABC Manufacturing's Smalltown Plant Analytical Laboratory. All analyses are performed under the direction of the Plant Chemist whose requirements include a Bachelor of Science Degree in Chemistry. (This position is currently held by Julia Smith, who has a Bachelor of Science degree in Chemistry from State College, plus 7 years experience.)	2. Does the Plant Chemist have a BS degree in Chemistry? ____ Yes ____ No
ANALYTICAL EQUIPMENT The equipment used for the analyses performed for the Waste Analysis Plan is as follows: Atomic Absorption Spectrophotometer - Perkin Elmer Zeeman 303 Model with HGA600 Perkin Elmer Graphite Furnace. Printer - Perkin Elmer PR-100. pH Meter - Fisher Accumet Model 325 or equivalent. Balances - Various to cover weights from 0.0001 g up.	3. Does the facility have all the equipment required to run the analyses performed for the waste analysis plan: • Perkin Elmer Zeeman 3030 Model Atomic Absorption Spectrophotometer with HGA600 Perkin Elmer Graphite Furnace? ____ Yes ____ No • Perkin Elmer PR-100 printer? ____ Yes ____ No • Fisher Accumet pH meter Model 325 or equivalent? ____ Yes ____ No • Balances to cover weights from 0.0001 g and up? ____ Yes ____ No
SERVICE AND QUALITY ASSURANCE (1) Rite Weight, Inc. - To service balances every 6 months. Includes test of scale deflection, precision, and accuracy of weight set. (2) Perkin Elmer - To service AAS and Graphite furnace as necessary. Note: Should ABC Manufacturing's laboratory, for any reason, not be able to analyze the samples, they will be preserved and sent to a contract laboratory (currently Jones Laboratory, Inc.). ABC Manufacturing's laboratory, or any laboratory at which samples are to be analyzed, will conform to a Quality Assurance Program as follows. For every analytical procedure, blanks, mid-point standards, calibration curves, and duplicate analyses are included. Quarterly reference standards are analyzed for all parameters in the Waste Analysis Plan and Ground-water Monitoring Plan. The Laboratory follows quality control and quality assurance procedures very similar to those given in SW 846, July, 1982, 2nd Edition, Section 10.4. In addition, the Laboratory must participate in EPA's annual Quality Assurance Program under the National Pollutant Discharge Elimination System (NPDES).	4. Are balances serviced every 6 months? ____ Yes ____ No

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EXAMPLE

TSDF Unit-Specific Conditions

Unit-specific permit conditions were established for each regulated unit at the ABC Manufacturing facility. In developing these conditions, the permit writer considered: the minimum requirements in 40 CFR 264, site specific environmental factors, the wastes handled in the unit, and any potential problems identified at the ABC Manufacturing facility. This example shows how a checklist can be developed to evaluate: 1) unit design, operation, and maintenance and 2) compliance with procedures and recordkeeping conditions. Examples of unit-specific conditions (relating to storage tanks and surface impoundments) and possible checklist questions derived from those conditions are set forth in Exhibit 3-3 below.

Visual inspection of the ABC Manufacturing storage tank should enable inspectors to answer Question 2. However, it is more subjective to determine whether the Permittee has maintained the system by replacing the filtration system "...when analytical results indicate that the system has become saturated or otherwise ineffective." In this case, inspectors will want to examine records regarding routine maintenance of the system, as well as analytical data.

ABC Manufacturing's permit mandates that surface impoundments P-12 and P-16 cannot accept wastes after November 8, 1992. If an inspection is conducted after that date, inspectors may include Question 4 in the protocol. Visual inspections may serve to determine whether waste continues to be placed in the impoundments. However, inspectors will need to review records to determine whether wastes were placed in the unit in the interim period between the inspection and November 8, 1992. In addition, inspectors should fashion questions from Section II.J and Attachment 8 of the permit to determine whether closure is proceeding on schedule.

Inspectors may also want to review whether the ABC Manufacturing facility is recording data on a daily basis; including Question 5 in the protocol will ensure that this issue is addressed. In addition, inspectors should review the data for trends and fluctuations to evaluate the need for further investigation and to assist with preparations for future inspections. Inspectors may question appropriate plan personnel about any inexplicable data points and note responses.

By examining the daily records for leachate generation, inspectors can determine weekly average leakage rates. In addition, while conducting inspection planning activities in the office, inspectors should note whether the Director had been informed of any occurrences of excess leakage and, if so, when. If inspectors discover that such an event occurred, they should include Question 7 to determine compliance.

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Exhibit 3-3
Unit-Specific Permit Conditions and Inspection Questions

PERMIT CONDITIONS	INSPECTION QUESTIONS
STORAGE TANKS	
The Permittee shall install an activated carbon filtration system on the vents of the 3010 tanks. A manifold system may be used to connect the vents from each of the tanks to treat vapors from all of the tanks with a single filter. The activated carbon filtration system shall be either a Calgon VentSorb or Calgon High Flow VentSorb Canister system. The Permittee shall replace the activated carbon filtration system in accordance with manufacturer's recommendations or when analytical results indicate that the system has become saturated or otherwise ineffective.	1. Has the facility installed either a Calgon Ventsorb or Calgon High Flow Ventsorb Canister System on the vents of the 3010 tanks?
The Permittee shall maintain at least 6 inches of freeboard (headspace) in the Laboratory Holding Tank at all times. This distance (6 inches) shall be measured downward from the bottom of the overflow drain pipe, which is indicated as Item 2 in Attachment __. The Permittee shall set the liquid level switch alarm system to be activated so that the specific freeboard (headspace) limit is not exceeded.	2. Does the Permittee maintain at least 6 inches of freeboard in the laboratory holding tank at all times? ____ Yes ____ No 3. Is the switch and alarm system set and activated to ensure that this limit is not exceeded? ____ Yes ____ No
SURFACE IMPOUNDMENTS	
This permit condition defines the five evaporation impoundment units at the facility and specifies that units P-12 and P-16 will be removed from service by November 8, 1992. The liner systems of units P-12 and P-16 do not meet the requirements of the minimum technology standards (Section 3004(o) of HSWA). The Permittee did not apply for a waiver of the requirement to retrofit these impoundments to meet the minimum technology standards. Consequently, these units cannot receive waste after November 8, 1992 and closure of these units must proceed on the schedule specified in Section II.J. and Attachment 8 of this permit.	4. Are units P-12 and P-16 continuing to receive wastes? ____ Yes ____ No
"The Permittee shall monitor for and record on a daily basis the presence and volume of liquids in the leachate detection, collection, and removal system sumps during the active life of the units (including the closure period), and at least weekly during the post-closure period."	5. Has the Permittee monitored and recorded on a daily basis the presence and volume of liquids in the leachate detection, collection, and removal system sumps? ____ Yes ____ No
"The Permittee shall, within 45 calendar days of detecting an increase of greater than 50 percent above the preceding weekly average leakage rate, submit to the Director and the Administrator a report on the leakage."	6. Has the average leakage rate for any week ever exceeded the previous week's average by more than 50 percent? ____ Yes ____ No 7. Did the Permittee submit the required report of this event to the Director within 45 calendar days? ____ Yes ____ No

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EXAMPLE

Corrective Action Conditions

Corrective action conditions may be verified on the basis of results and/or reports, such as progress reports. Certain corrective action conditions for the ABC Manufacturing facility's land disposal unit are listed in Exhibit 3-4. The permit condition identifies those constituents and associated maximum concentration limits for which the permittee must monitor to determine whether corrective action is required. Prior to an inspection, inspectors should review all available reports regarding corrective action progress and related permit modifications (or applications) to determine the current status of operations. Inspectors should inquire as to whether all constituents are measured at the listed concentration limits. Inspectors may also design questions directed at whether the appropriate statistical test was used. For example:

Does ABC Manufacturing make use of the Behrens-Fisher Student's t-test?
____ Yes ____ No

If not, did the Regional Administrator approve the use of an equivalent test?
____ Yes ____ No

In addition, inspectors may want to independently determine whether the ground-water protection standards were exceeded by applying the approved statistical technique. If this inspection is the first one after commencement of the action, the checklist questions may focus on the proper establishment and placement of pumping wells. For example:

Was a pumping well established at grid coordinates (X15, Y12)?
____ Yes ____ No

Other questions may involve compliance with reporting requirements. A more comprehensive inspection would involve sampling and analysis to independently verify the accuracy of ABC Manufacturing's reports.

By examining the daily records for leachate generation, inspectors can determine weekly average leakage rates. In addition, while conducting inspection planning activities in the office, inspectors should note whether the Director had been informed of any occurrences of excess leakage and, if so, when. If inspectors discover that such an event occurred, they should include Question 7 to determine compliance.

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Exhibit 3-4
ABC Manufacturing Facility's Corrective Action Conditions

Ground-water shall be removed [at all locations] where hazardous wastes, hazardous constituents, or breakdown products have entered the ground-water from a solid waste management unit, as required under 40 CFR §264.101.

Constituent	Concentration Limit	Basis
Creosote	Presence or absence*	Background
Cresols (total of o, m & p-cresol)	1750 µg/l	ACL
Naphthalene	MDL	Background
Pentachlorophenol	0.20 mg/l	ACL
Phenol	3.5 mg/l	ACL
Fluoranthene	0.21 mg/l	ACL
Chrysene	MDL	Background
2,4-Dimethylphenol	MDL	Background
2,3,4,6-Tetrachlorophenol	350 µg/l	ACL
P-chloro-m-cresol	MDL	Background
2,4-Dichlorophenol	105 µg/l	ACL
2,4,6-Trichlorophenol	MDL	Background
Benzo (k) fluoranthene	MDL	Background
Benzo (b) fluoranthene	MDL	Background
2,4-Dinitrophenol	70 µg/l	ACL

The Permittee must use the Behrens-Fisher Student's t-test or an equivalent statistical test approved by the Regional Administrator to determine if concentrations exceed ground-water protection standards of this permit.

The analytical method and the minimum detection limit (MDL) for each constituent must be designated in all reports of analyses.

If the Permittee identifies additional Appendix VIII constituents, he shall:

a) Re-sample the affected well(s) within thirty (30) days;
b) Notify the Regional Administrator in writing within seven (7) days if the presence of additional constituents is confirmed;
c) Within sixty (60) days submit to the Regional Administrator, a determination whether there is a statistically significant increase above the background. The Behrens-Fisher Student's t-test or an equivalent statistical test approved by the Regional Administrator shall be used to determine a statistically significant increase; and
d) If a significant statistical increase is determined, the Permittee must submit to the Regional Administrator an application for a permit modification to make any appropriate changes to the program.

Corrective Action Pumping

The well at grid coordinates (X15, Y12) shown on Figure 1 shall be installed initially to extract the plume of contamination migration from the sludge pits, as required under 40 CFR §264.100(b) and §264.101. Additional extraction wells shall be installed within 180 days of determination by the Permittee or EPA that the initial extrication well system is not extracting the entire plume. The Permittee shall comply with all other state and federal laws regarding treatment and discharge of the extracted water. The well shall be pumped at a maximum well yield until Condition II.C.1 is met.

Time Period for Implementation

Under 40 CFR §264.100(c) and §264.101, the Permittee shall commence corrective action no later than twenty-four (24) months after the effective date of the permit.

The Permittee shall submit a compliance schedule progress report to the Regional Administrator describing progress on implementation of corrective action no later than fourteen (14) days from the first anniversary of the effective date of the permit.

Corrective Action Monitoring

The Permittee shall monitor the effectiveness of corrective action on ground-water quality and ground-water flow across the entire extent of the contamination plume emanating from the sludge pits, as required under 40 CFR §264.100(d) and §264.101.

The corrective action monitoring shall commence on the effective date of the permit with quarterly monitoring in wells WC-7 and WC-14 for the hazardous constituents listed in II.C.1.

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3.3 Summary

- Although generic checklists may be appropriate and efficient for conducting inspections at interim status facilities, permitted facilities are subject to site-specific conditions that must be identified and inspected.

- Two models are recommended for developing permit-specific inspection plans:

  - Checklists
  - Permit summary sheets.

  Inspectors and their supervisors may choose either, or a combination of the two.

- Inspectors must assemble the materials needed for a thorough inspection of a permitted facility:

  - RCRA permit and permit application
  - Orders and consent decrees
  - RCRA regulations.

- In reviewing permits, inspectors must review all pertinent information, including other documents or the permit application when referenced in the final permit.

- Reference should be made to the procedures outlined for developing an inspection protocol. Using the permit, an inspector can focus on:

  - Overall site orientation
  - Releases
  - Other relevant conditions.

Having developed an effective protocol, inspectors will be ready to conduct an inspection.

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4.0 Conducting An Inspection

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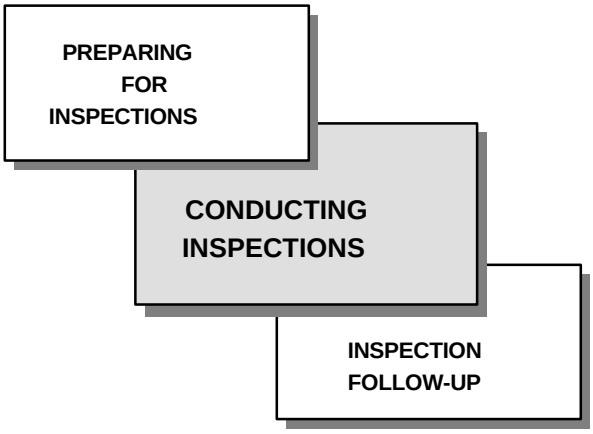

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4.1 Introduction

The **authority to conduct inspections** is set forth in Section 3007(a) of RCRA and is reproduced verbatim in Exhibit 1-4 of this Manual. Section 3007(a) grants authority to inspectors to enter the premises of anyone who "generates, stores, treats, transports, disposes of, or otherwise handles or has handled hazardous wastes" and to access all records pertaining to such wastes.

The responsibilities of inspectors in conducting inspections are outlined in the statutory authority. Inspectors must:

- **Enter premises at reasonable times and complete inspections as promptly as possible**
- **Issue receipts for samples collected**
- **Provide duplicate samples**
- **Furnish owners, operators, or agents copies of any sample analyses conducted.**

In this chapter, inspectors will be provided with detailed information that will assist them in performing the following steps:

- Facility entry
- Conducting an opening discussion
- Reviewing and understanding facility operations, waste handling procedures, and records
- Visual inspections
- Documentation of observations
- Conducting a closing discussion.

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4.2 Facility Entry

The **first stage of an inspection** requires advance consideration and will set the tone for the remainder of the site visit. Therefore, inspectors must make certain decisions about how they will act once on-site and how to respond to obstacles encountered.

Arrival

Inspections can be announced or unannounced, as discussed in Section 2.6 above. Regardless, inspectors should determine an appropriate time of entry. Inspections must be conducted at a reasonable time or during normal working hours. Inspections that cannot be completed before the normal close of business will continue on the next business day, unless management does not object to completing the inspection after closing time (if the time needed to complete the inspection is short). If a facility is open continuously, or if management leaves before operations stop, inspectors may continue an inspection using their own discretion. In any event, an inspection should be completed in a timely manner.

Upon arrival, inspectors should:

- Locate the proper official (owner, operator, or agent) as soon as possible and determine whether this official is authorized to offer assistance
- Present identification to the proper officials, even if it is not requested, and keep identification in sight at all times
- Document arrival in a logbook or field notebook, noting date, time, and the names and titles of facility personnel encountered.

Generally, proper identification consists of an inspector's EPA or state agency identification card and any additional identification required by EPA Regional or state policy. Inspectors should familiarize themselves with applicable Regional or state policy on identification requirements.

Inspectors may be asked on arrival to sign a log, passbook, waiver, or other form prior to entering the facility. In general, inspectors may sign logs or passbooks; they are used by facilities to keep a record of visitors to the facility and are useful in the event of a fire or other emergency.

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Important:

Inspectors should **not** sign waivers or other legal documents if they limit the facility's liability in the event of an accident. Additionally, inspectors **should not sign other legal documents limiting their rights or the owner's responsibilities while the facility visit is occurring.**

Consent

The owner or agent in charge of a facility at the time of an inspection must give consent to the inspector to inspect the premises.

Inspectors should note that a consent to inspect may be withdrawn at any time. However, any segment of an inspection that is completed before such withdrawal remains valid. Withdrawal of consent is equivalent to a refused entry. In such an event, inspectors must secure a warrant to complete the inspection. Refusal of entry and use of a warrant to obtain entry are discussed in the following sections.

Inspectors may observe and report on things in **plain view** (i.e., anything that a member of the public could be in a position to observe) even without consent to site entry. This includes observations made while on private property in areas not closed to the public (e.g., matters observed while the inspector presents identification).

During an inspection, an owner/operator may try to limit an inspector's access to portions of the facility. Limiting access to portions of the facility is similar to denying access to the facility. The appropriate response to being denied access is discussed in the following sections.

Denial of Access

Inspectors may be denied access for several reasons, some of which may be valid. Inspectors can reasonably be denied access if they do not have the safety equipment required by a facility (per OSHA or NIOSH requirements). In such a case, it will generally be possible to obtain access by satisfying the owner/operator's objection (e.g., by returning on another day with the required safety equipment). Inspectors do not usually need a warrant to obtain access in such cases.

Legally indefensible actions resulting in denial of access include:

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- An owner/operator refusing to allow an inspector to bring in necessary equipment (e.g., camera)
- An owner/operator refusing an inspector access to documents
- An owner/operator refusing entry due to a strike and/or plant shutdown
- An owner/operator refusing entry due to an inspector's refusal to sign a waiver or other legal document restricting the owner/operator's liabilities or obligations.

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Response to Denial of Access

- Ask the reason for denial
- If the problem is beyond the inspector's authority, suggest that the official contact an attorney to obtain legal advice on his/her responsibility under §3007 of RCRA
- Do not, under any circumstances, discuss potential penalties or do anything that might be construed as threatening
- If access is still denied, fill out a "Denial of Access Report" (the format is set forth in Exhibit 4.1) (obtain the signature of the facility representative if possible)
- Leave the premises and document any observations made pertaining to the denial, particularly any suspicion of violations
- Report all aspects of denial of access to the appropriate Regional or state enforcement division to determine the appropriate action to take and to get help in obtaining a search warrant
- A federal or state enforcement division attorney should assist the inspector in preparing the documentation necessary to obtain a search warrant and in arranging for a meeting with the inspector and a U.S. or State Attorney (the inspector or attorney will bring a copy of the appropriate draft warrant and affidavits to the meeting)
- For federal inspections, the enforcement division attorney will inform the appropriate EPA Headquarters enforcement attorney or equivalent of any entry refusals and will forward copies of all papers filed
- The attorney will then secure a warrant and forward it to the inspector and/or the U.S. Marshal or equivalent state law enforcement authority.

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Exhibit 4-1
Format for Denial-of-Access Report

DENIAL-OF-ACCESS REPORT

On _____ at _____ I was denied access into

_____ at _____
Location

by _____
Facility Representative's Name and Title

for the following reason(s):

List here :

1. _____

2. _____

_____
Signed/Inspector

_____
Signed/Facility Representative

The facility representative, _____ , has refused

to sign this Denial-Of-Access Report. (_____ , _____ .)

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Use of Warrant to Gain Access

Inspectors should keep the following points in mind when seeking access to a facility under a **search warrant**:

- A U.S. Marshal or local law enforcement officer should accompany inspectors if the probability is high that entry will still be refused, or if the owner/operator has made threats of violence
- Inspectors should never attempt to make forceful entry into a facility
- If an owner/operator refuses entry to an inspector with a warrant and the inspector is not accompanied by a U.S. Marshal or local law enforcement officers, the inspector should leave the facility and inform an enforcement division attorney.

Conducting an Inspection Under Warrant

The procedures for **conducting an inspection under a search warrant** will differ from those for conducting an inspection under normal circumstances.

Procedures for Inspection Under Warrant

- **The inspection must be conducted in strict accordance with the warrant. If the warrant restricts the inspection to certain areas or to certain records, inspectors must comply with these restrictions.**
- **If sampling is authorized, all procedures must be carefully followed, including presentation of receipts for all samples taken. The facility should also be informed of its right to retain a portion of the samples obtained by inspectors.**
- **If records or property are authorized to be taken, inspectors must provide receipts and maintain an inventory of all items removed from the premises.**

Dealing With Threats

The receptiveness of facility officials to an inspection will vary from facility to facility. In general, most inspections proceed without difficulty. However, in some cases, facility representatives may threaten inspectors trying to obtain entry to the facility or during the course of an inspection (e.g., when trying to obtain access to a particular portion of a facility or after an inspector suggests the existence of a violation).

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Inspectors should determine the appropriate course of action for managing a threat based upon the nature of the threat and the actions of facility officials. If threatened with violence, inspectors should terminate an inspection and follow procedures presented in the section entitled "Denial of Access." In such cases, inspectors should not return to the facility unless accompanied by a U.S. Marshal or local law enforcement officer. Inspectors will probably need to obtain a warrant in these cases.

If inspectors receive threats that do not involve a threat of physical harm (e.g., a threat to call the inspector's supervisor), they will not generally need to terminate the inspection, unless the owner/operator withdraws consent or denies access in addition to making a threat. In such a case, inspectors should follow the relevant procedures discussed in previous sections. They should also be certain to note the threats in their field log.

Inspectors must avoid making any statements to facility representatives that could be construed as threatening or inflammatory.

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4.3 Opening Discussion

When inspectors locate proper facility authorities and present their identification, it may be appropriate to discuss their inspection plans with facility officials.

AGENDA FOR OPENING MEETING
• **Outline inspection objectives**—this will inform facility officials of the purpose and scope of the inspection and may help to avoid misunderstandings. • **Provide management with information on RCRA**—during an initial inspection, inspectors may wish to discuss the provisions of RCRA and any new requirements that may affect the facility, as well as furnishing a copy of the Act. Acting in this manner, inspectors are regarded as sources of regulatory information and can help strengthen Agency-industry relations. • **Establish the order of the inspection**—discussing the sequence of the inspection will eliminate wasted time by allowing officials time to make records available and to start intermittent operations. • **Establish meeting schedules**—scheduling meetings with key personnel will avoid time wasted in waiting for people to become available. Inspectors should obtain business cards from all persons interviewed during the inspection. • **Arrange for accompaniment by facility personnel**—during compliance inspections, it is helpful if a facility representative accompanies inspectors to explain operations and to answer questions. • **Schedule a closing conference**—a wrap-up meeting should be scheduled with appropriate officials to provide a final opportunity to gather information, to answer questions, and to complete administrative duties. • **Advise management of the availability of duplicate samples**—the facility has a right to request, and receive immediately, duplicates of any samples collected during the inspection for laboratory analysis, as well as copies of subsequent analysis results (if an enforcement case is not pending or being pursued). • **Gather general information**—inspectors should obtain any necessary general information, such as the name and address of the chief executive officer of the facility. • **Ascertain whether the owner/operator is going to claim any information as confidential business information**—an owner/operator should inform inspectors if and when information is confidential. If an owner/operator does make a claim of confidentiality, inspectors should provide the appropriate forms.

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Inspectors should establish charge of an inspection during the opening discussion with the owner/operator. However, inspectors should be sensitive to the need to avoid, as much as possible, disrupting a facility's operations.

Throughout an inspection, inspectors should consider themselves to be investigative reporters searching for information that shows non-compliance with regulations. If inspectors diligently question facility personnel and observe operations, they will be able to discern inconsistencies in what they see, hear, and have previously reviewed, leading to possible findings of violations.

Inspectors must pursue inconsistencies until they are resolved. For example, if a facility is using a commercial solvent that generates a listed waste, but does not report that it is generating that waste, inspectors should determine what happens to the solvent. Questions: "Where is the solvent used in the plant?" "Is it all consumed during use?" Inspectors must then decide if the facility representative's explanation is plausible, and whether it is consistent with the inspector's observations and knowledge. **Inspectors should pursue inconsistencies until they are satisfied that they either constitute a violation or do not.**

Holding an opening discussion immediately after receiving access to a facility may not be appropriate in all cases. Depending upon the objective of an inspection, inspectors may want to see particular operations or locations in a facility prior to an opening discussion. For example, in an unannounced inspection of a facility with a suspected violation, an inspector may want to go directly to the site of the suspected violation to observe the violation before the owner/operator can stop, conceal, or otherwise obscure the non-complying operation or condition.

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4.4 Operations, Waste Handling, and Record Review

Discussion of Operations and Waste Handling

Following an opening discussion, inspectors should have facility representatives describe facility operations and waste generation and management practices. In general, inspectors will have become familiar with a facility through previous review of the facility's file. Therefore, the purposes of the discussion will be to:

- Obtain a more detailed understanding of operations
- Answer any questions inspectors may have regarding waste generation, waste flow, and waste management activities
- Identify any changes in operating and/or waste management practices
- Identify and reconcile any discrepancies between the operations described by the facility representative and those described in the facility file.

During this discussion, inspectors should prepare waste information sheets (included in Appendix IV) on each waste managed at the facility.

Record Review

After discussing **facility operations and waste handling practices**, inspectors usually proceed to the **record review**. The record review provides inspectors with the opportunity to become thoroughly familiar with a facility and to formulate specific questions to be investigated during the visual inspection of the facility. <u>However, the record review does not have to occur before the visual inspection</u>. In some cases, inspection objectives may be best served if the visual inspection occurs before the record review, or the visual inspection may be performed first for other reasons (e.g., availability of facility personnel or weather conditions).

RCRA inspectors are responsible for reviewing all recordkeeping, as required of the owner/operator. Although no standard format is required, inspectors should check for: 1) the presence of required records or plans, 2) dates of the documents to ensure the documents are kept up-to-date and/or maintained for the required period, and 3) any suspected falsification of data.

The regulatory requirements under Parts 262, 263, 265, 266, 268, 270, and 279 mandate that the following records be maintained by regulated parties:

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Records To Be Maintained By Regulated Parties

1. Generators:

- 262.34 - Job titles and personnel records, agreements with local authorities, and contingency plan.
- 262.40 - Manifests, biennial reports, exception reports, and waste analyses and test results (or other bases for determining the hazardous nature of a waste and its classification).
- 268.7 - Land disposal notification and certification.

2. Transporters:

- 263.22 - Manifests, shipping papers for bulk shipments by rail or water, and manifests for foreign shipments
- 279.46 - Tracking records for shipments of used oil.

3. Treatment, Storage, and Disposal Facilities:

- General facility standards, including the following:

  265.13 - Waste analysis plan
  265.15 - Inspection schedule
  265.16 - Job titles and personnel records
  265.51,53 - Contingency plan
  265.71-77 - Manifest system (records of manifests)
  265.73 - Operating record
  265.93 - Outline of ground-water monitoring plan
  265.94 - Ground-water monitoring record
  265.112 - Closure plan
  265.118 - Post-closure plan
  268.7 - Land disposal notification and certification
  268.19(d) - Special notification for characteristic wastes.

- Facility-specific standards, including the following:

  265.193(i) - Annual assessment for tanks
  265.196(f) - Certification of major repairs
  265.197(2) - Contingent post-closure plan
  265.279 - Land treatment, requirements for operating record and closure plan
  265.309 - Landfills, requirements for operating record, contents and organizations of cells, and closure plan
  265.440(c) - Drip pad contingency plan
  265.441(a) - Drip pad evaluation
  265.441(b) - Drip pad upgrade plan
  265.443(a) - Drip pad assessment
  265.443(b) - Drip pad waste collection system cleaning
  266.42 - Used oil analysis
  266.44 - Used oil fuel analysis

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Records To Be Maintained By Regulated Parties (Continued)

3. Treatment, Storage, and Disposal Facilities: (continued)

266.100(c) - Boiler and industrial furnace exemption for metals recovery units
266.103(k) - Boiler and industrial furnace operating record
266.108 - Small quantity boiler and industrial furnace burner exemption waste quantity records
266.111 - Direct transfer equipment inspection records for boilers and industrial furnaces
266.112 - Boiler and industrial furnace waste residue data
270.30 - Permits, requirements for monitoring information (Subparts F & G).

- Required submittals to the Regional Administrator (see Exhibit 4-2).

4. Part A Permit Applicants (interim status TSDFs):

- 270.10 - Data used to complete permit applications.
- 270.30 - Records of all monitoring information.

5. Used Oil Processors and Re-Refiners

- 279.55 - Used oil analysis plan.
- 279.56 - Tracking records.
- 279.57 - Operating record.
- Required submittals to the Regional Administrator (see Exhibit 4-2).

6. Off-Specification Used Oil Burners

- 279.65 - Tracking records.
- 279.66 - Off-specification used oil certification.
- Required submittals to the Regional Administrator (see Exhibit 4-2).

7. Used Oil Fuel Marketers

- 279.72 - Analysis of used oil fuel.
- 279.74 - Tracking records.
- 279.75 - Off-specification used oil certification.
- Required submittals to the Regional Administrator (see Exhibit 4-2).

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Exhibit 4-2
Required Submittals to the Regional Administrator

Section 265.11	EPA identification number.
Section 265.12	Notice of date of arrival of hazardous waste from a foreign source.
Section 265.56	In cases of releases, fires, or explosions, notification by emergency coordinator that an affected area is adequately cleaned before operations are resumed. Written report by emergency coordinator on emergency incident, within 15 days of incident.
Section 265.72	Manifest discrepancy report within 15 days of receipt of waste.
Section 265.74	Upon closure, copy of records of waste disposal locations and quantities.
Section 265.75	Biennial report.
Section 265.93	In cases of confirmation of analyses indicating significant increase (or pH decrease), a written notice that the facility may be affecting ground-water quality within 7 days of date of such confirmation. Within 15 days after above notification, specific plan for a ground-water quality assessment program at the facility. After determination of the above ground-water quality assessment, written report containing an assessment of ground-water quality and/or indicating a reinstatement of the indicator evaluation program.
Section 265.94	Recordkeeping and reporting: ground-water monitoring information as specified. Annual reports of Section 265.75 contain results of ground-water quality assessment program.
Section 265.115	Certification of closure.
Section 266.103	Certifications of pre-compliance and compliance.
Section 270.110	Permit application and amendments.
Section 279.51	EPA identification number.
Section 279.57	Biennial report.
Section 279.62	EPA identification number.
Section 279.73	EPA identification number.

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While performing a record review in accordance with the applicable regulations, inspectors may encounter problems in accurately interpreting the regulations. Therefore, the Agency has made available a number of guidance documents and lists of background documents that will aid both inspectors and the regulated community to comply with the recordkeeping requirements of Subtitle C. These are presented in Appendix V of this Manual. A complete catalog of background documents can be obtained from the RCRA Superfund Industrial Assistance Hotline at 1-800-424-9346 (in the Washington, D.C. area, 703-412-9810).

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4.5 Visual Inspection Procedures

In general, the **visual inspection of a facility** should proceed in accordance with an inspection plan or strategy that inspectors develop during inspection planning. As previously discussed in Section 2.6 above, this plan should outline, in the level of detail considered appropriate by inspectors, the operations they intend to inspect and the tentative order in which they will conduct the inspection. Inspectors may, however, determine that it is appropriate to modify a plan based upon information obtained during the record review or other factors, such as the availability of specific personnel for interviewing or the scheduled operations of waste management units to be inspected.

Inspectors should change their planned approach, as needed, to accommodate conditions they encounter at a facility.

Step-by-step procedures for visually inspecting a facility will vary according to the type of facility and the objectives of the inspection. Specific procedures for inspecting facilities for compliance with particular RCRA standards are organized by regulation in Appendix III to this document. That appendix provides a summary of RCRA standards and describes detailed suggested inspection procedures for determining compliance with Parts 262, 263, 268, and the general facility standards of Parts 264, 265, and 266.

Generic checklists, which may serve to guide inspectors in performing inspections and in recording results of inspections, are provided in Appendix IV of the Manual. Regional offices and state agencies may have developed their own checklists that should be used in lieu of those provided in Appendix IV.

Inspectors should conduct inspections in a way that allows them to evaluate and understand the waste flow within a facility and to determine the compliance status of each segment of the facility's waste management system.

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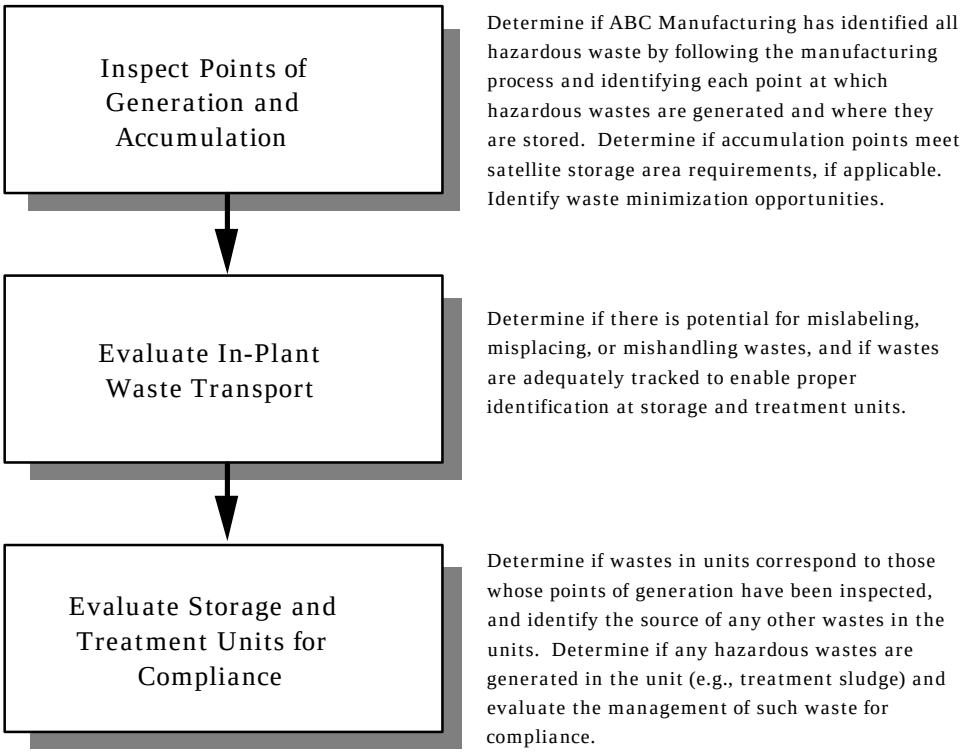
EXAMPLE

In ABC Manufacturing's plant, which generates hazardous waste, stores waste for off-site disposal, and treats some waste on-site, an inspection **COULD** proceed as follows:



The progression of steps described above enables inspectors to understand the movement and control of wastes within a facility. Inspectors will then be able to identify:

- Hazardous wastes that may not currently be considered hazardous by the owner/operator
- Non-complying procedures or management practices that are part of the facility's routine operations
- Steps in the management process during which wastes may be mishandled or misidentified, and in which there are opportunities for spills or releases
- Unusual situations which may be encountered during an inspection that vary from the facility's stated normal operating procedures and that may indicate potential violations.

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Such a progression also allows inspectors to complete a checklist and to evaluate the facility in an organized manner, helping to ensure that all aspects of hazardous waste management activities at the facility are thoroughly inspected.

Inspections may be conducted completely on foot or, at larger facilities, partially by vehicle. In any case, inspectors should note all that is happening at the facility. Although inspectors should generally follow an inspection plan to better understand waste generation and management within a facility, they should not feel compelled to adhere to their original inspection plan or route. Rather, they should feel free to diverge from their original plan to further investigate any observations that may uncover potential violations or environmental hazards.

As stated earlier, inspectors should maintain control of the pace and direction of an inspection. They should ask relevant questions of both the facility representative guiding them through the facility and of other personnel. By questioning diverse personnel, inspectors may identify inconsistencies in explanations of procedures or operations that could indicate possible non-compliance that they should further investigate, and get an indication of the adequacy of the personnel training program. Inspectors should record answers to questions and observations in a field log or notebook, which is discussed in Section 4.6.

Inspectors should be careful to **remain oriented** during the tour of a facility so that they can accurately note locations of waste management areas, possible release points, potential sampling locations, etc. At larger facilities, inspectors should carry a map or plot plan in order to note locations and maintain their orientation.

Use of Inspection Checklists

As previously discussed, inspectors should complete as much of applicable checklist(s) as possible in the facility office, generally during the record review, prior to visually inspecting the facility (unless the objectives of the inspection or other circumstances dictate that the visual inspection occur before the record review). Inspectors should leave blank those sections of checklist(s) that require visual inspection to complete.

During the visual inspection, inspectors should complete those sections of checklist(s) requiring visual inspection. <u>However, completing these sections is not the sole purpose of a visual inspection</u>, and the inspector must not limit the visual inspection to only completing the checklist. Inspectors should be aware of, and investigate, all relevant waste generation and management activities throughout the facility, and note what is happening around them as they tour the facility. If inspectors conduct visual inspections in ways which allow them to understand how wastes are generated, transported, and managed at the facility (as previously discussed), they should be able to complete the applicable checklists easily during the inspection <u>and</u> obtain other important information.

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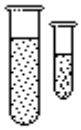
Determining the Need for Sampling and Identifying Sampling Points

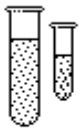


Inspectors do not routinely conduct **sampling** as part of CEIs at interim status and permitted facilities. Rather, they generally perform sampling during inspections in support of case development, which normally occur after potentially non-complying conditions or criminal activities have been identified during a CEI or through some other means. Sampling procedures to be followed during case development inspections/evaluations are provided in detail in the Technical Case Development Guidance Document, OSWER Dir. 9938.3 (1988), available from the Office of Waste Programs Enforcement. Additional information on sampling is provided in several EPA publications, including:

- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Office of Solid Waste, Pub. No. SW-846, July 1982, as amended (Update I - April 1984; Update II - April 1985)

- Characterization of Hazardous Waste Sites - A Methods Manual, Volume II. Available Sampling Methods, EPA, Pub. No. 600/4-84/075, April 1985.

If inspectors are to conduct sampling during a CEI, they will determine this, or be so informed, during inspection planning. Inspectors should refer to the above mentioned manuals during inspection planning to obtain information on preparing sampling plans, taking samples, preserving samples, splitting samples with an owner/operator, and completing chain-of-custody requirements.



Although inspectors will not usually perform sampling during CEIs, they should be aware of, and identify, potential sampling requirements that may need to be fulfilled in future inspections, particularly in cases where an inspector has identified potentially non-complying conditions or criminal activity. In these cases, it is possible that case development inspections/evaluations will need to be performed at the facility in the future. Some conditions indicating a possible need for future testing include:

- The owner/operator is handling a potentially hazardous waste as a non-hazardous waste—sampling may be required to verify that the waste is hazardous or non-hazardous.

- In-plant waste handling practices indicate that mislabeling/ misidentification of waste is likely to occur, or that wastes may vary significantly in characteristic over time and be mismanaged as a result—sampling may be required to demonstrate that the facility is mislabeling or misidentifying wastes.

- There is visible or other observable evidence of possible releases of hazardous wastes from waste management units, satellite storage areas, waste generating areas, etc.—sampling media and wastes may be required to demonstrate that a release has occurred or is occurring.

- Wastes may be managed improperly, i.e., in an inappropriate treatment or disposal unit—sampling may be required to verify that the correct wastes are being managed in the facility's various waste management units.

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To facilitate any future sampling, inspectors may identify the media or wastes to be sampled, the physical locations at which sampling should occur (e.g., the location of a possible release), the steps within a treatment process to sample, the physical characteristics of the medium to be sampled (e.g., sludge, granular solid), and other relevant information.

Observations for Follow-Up Case Development

Observations of potentially non-complying conditions or criminal activity made by inspectors during CEIs may result in the initiation of enforcement actions.

In all cases, inspectors should accurately and validly document all observations that may lead to or support further case development activities. They should record in their notebooks any and all observations made during an inspection and, where appropriate, use other forms of documentation (e.g., photographs) to further record potentially non-complying conditions. Documentation is discussed further in Section 4.6 following.

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4.6 Documentation

Documentation refers to all printed and mechanical media produced that inspectors copy or take to provide evidence of suspected violations. **It is strongly recommended that inspectors record information collected during an inspection in the following types of records only: field notebooks, checklists, photographs, maps, and drawings. Recording information on other loose papers is discouraged; loose papers may be easily misplaced and the information on them discredited during hearings. Proper documentation and document control are crucial to the enforcement system**, as the Government's case in a formal hearing or criminal prosecution often hinges on evidence that inspectors gather. Therefore, it is imperative that inspectors keep detailed records of inspections, investigations, photocopies, photographs taken etc., and thoroughly review all notes before leaving a site.

Document control ensures accountability for all documents when an inspection is completed. Accountable documents include items such as: logbooks, field data records, correspondence, sample tags, graphs, chain-of-custody records, bench cards, analytical records, and photos. To ensure proper document control, each document should bear a serialized number and should be listed, with the number, in a project document inventory assembled upon completion of an inspection. Water-proof ink should be used to record all data on serialized, accountable documents.

Field Notebook

In keeping field notes, inspectors should maintain a legible daily diary or **field notebook** containing accurate and inclusive documentation of all inspection activity, conversations, and observations. This field notebook should also include any comments, as well as a record of actual or potential future sampling points, photograph points, and areas of potential violation. The diary or field notebook should contain **only facts and observations** because it will form the basis for later written reports and may be used as documentary evidence in civil or criminal hearings. Notebooks used for recording field notes should be bound and have consecutively numbered pages. A separate notebook should be used for each facility inspected, in case the notebook has to be made available to the owner/operator and/or his or her attorney as part of a legal action (e.g., through discovery). **Because field notebooks may be made available to owner/operators and their attorneys, inspectors should be careful to avoid recording potentially embarrassing notes or notes which may weaken any future enforcement action.**

For federal inspectors, field notebooks are part of EPA's Regional files, not inspectors' personal records. State policy on field notebooks may vary; thus, state inspectors are advised to become familiar with applicable state policy.

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Checklists

In general, inspectors should use **checklists** in conjunction with field notebooks to record inspection observations. However, Regions or states may have different policies on the use of checklists, and inspectors should follow their applicable Regional or state policy. Also, some inspectors may not be comfortable with checklists and should find a mechanism for recording information consistent with his/her style.

Appendix IV of this document provides checklists for use by inspectors. In some cases, Regions or states may have preferred checklists that should be used instead of the checklists provided here. Inspectors should use the checklists preferred by their Region or state. **Inspectors should not rely on checklists as a substitute for knowledge and understanding of the regulations.**

As discussed in Section 4.5, inspectors should remember that checklists are only a tool for organizing, conducting, and recording the results of an inspection; they should not limit the scope of an inspection in any way since completion of a checklist is not a valid goal. Inspectors should be observant of the general operation of a facility, waste management practices, and potentially regulated activities not covered by checklists (e.g., new activities of which they were not aware in planning the inspection) as they perform the record review and visual inspection.

Inspectors should generally limit the scope of comments on a checklist to checking the relevant answers, although more extensive comments may be made if no alternative record is available for noting observations. It is recommended that comments or observations on checklist answers be recorded in the field notebook, where there is adequate room for explanations, sketches, etc., to expand upon checklist answers.

Photographs

Photographs provide the most accurate documentation of inspectors' observations, and inspectors can use this significant and informative source for review prior to future inspections, at informal meetings, and at hearings. **Documentation of a photograph's origin is crucial to its validity as a representation of an existing situation**. Inspectors should note, in a field notebook or on a facility map, the following information about each photograph they take:

- Date
- Time
- Number of the photo on the roll
- Type of film, lens, and camera used
- Signature of photographer
- Name and ID number of site
- General direction faced by inspector when taking photograph
- Location of checkpoint on site
- Other comments (e.g., weather conditions).

Inspectors should limit their comments to these pertinent facts because any discussion of the photograph in terms of its content could jeopardize its value as evidence.

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Inspectors may select the type of camera they will use, although 35mm single lens reflex cameras are most common. Inspectors should also note that photographs taken with a telephoto lens may not be admissible evidence as these lenses may distort the scale of the photo or image. When taking photos, inspectors should include in the photograph a ruler or other item, as appropriate, for showing the scale of an object photographed.

If inspectors have video cameras available to them, they are well-advised to employ them as an excellent means of documentation. EPA anticipates that video cameras may gradually become standard equipment to be used on inspections. Video cameras have the unique ability to capture verbal and visual inputs simultaneously, thereby providing a more comprehensive picture of a facility. Inspectors should be sure to display the date and time of their recording in the video itself.

EPA has not developed a specific policy pertaining to the use of video cameras on inspections. Certainly, some facility owner/operators may object to their use by inspectors. Inspectors, therefore, should be well-versed in their own offices' policies.

Maps and Drawings

Schematic **maps, drawings, charts,** and other graphic records can be useful in documenting violations. They can provide graphic clarification of a particular site relative to the overall facility; demonstrate spill or contamination parameters (e.g., the size of a contaminated area) relative to the height or size of objects; and other information that, in combination with other documentation, can produce an accurate and complete evidence package.

Maps and drawings should be simple and free of extraneous details. Basic measurements should be included to provide a scale for interpretation, and compass points should be included. Generally, maps should also be used to show where photographs were taken, and in what direction; photo locations can be shown on the map using the roll number, exposure (photo) number, and a direction arrow.

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4.7 Closing Discussion

Facility officials are usually anxious to discuss the findings of an inspection before inspectors leave. Inspectors should hold a **closing meeting or conference** for the presentation and discussion of preliminary inspection findings. During this meeting or conference, inspectors can answer final questions, prepare necessary receipts, provide information about RCRA, and request the compilation of data that were not available at the time of the inspection. Inspectors should also be prepared to discuss general follow-up procedures, such as how results of the inspection will be used and what further communications the Region or state may have with the facility. Inspectors should conduct closing conferences in accordance with any applicable guidelines established by the EPA Regional Administrator or state director.

APPROACH TO CLOSING DISCUSSION

When conducting a closing discussion, inspectors should:

- Review inspection notes and checklists in private prior to the closing discussion. Inspectors may need to take time to refer back to applicable federal or state standards, call their supervisor, talk with Regional or Headquarters counsel, or call the RCRA Superfund Industry Assistance Hotline (1-800-424-9346 or, in the Washington, D.C. area, 703-412-9810), to obtain a clear interpretation of the regulations as they apply to the specific conditions at the facility. In general, at this point, inspectors should:

  1) Identify any questions that remain to be asked of facility officials. These may include questions raised during the visual inspection that need clarification and questions concerning potential violations uncovered during the inspection of which the facility representative is unaware.

  2) Determine which inspection results to discuss with the facility representatives and how to approach the discussion, i.e., how definitively to present results. **Of course, all inspection findings are preliminary until reviewed by an inspector's supervisor.** However, inspectors should be prepared to discuss all obvious violations of rules observed during the inspection forthrightly; they should not suggest that an owner/operator of a facility is in criminal violation of RCRA or that civil or criminal action will be taken. Inspectors may not want to discuss tentative findings when there is doubt that a violation has occurred and where they will need to further review facility conditions, regulations, and guidance to determine compliance.

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APPROACH TO CLOSING DISCUSSION (Continued)

3) Anticipate questions that may be asked by the facility representatives and determine how to respond. Obviously, questions that may be asked will largely depend on inspection results. Inspectors can anticipate that a facility representative may challenge specific results, ask for clarifications of rules or results, and request help in understanding how to respond to or correct non-complying conditions. Inspectors should be prepared to answer all questions within their ability, authority, and knowledge, and to defer answering questions that they cannot answer with certainty. Inspectors should tell the facility representative how they will follow-up on deferred questions, and may refer the representative to appropriate EPA or state officials for answers to questions beyond their authority.

- After completion of the first step, meet with the facility representatives to ask questions, review results, and answer their questions. When presenting results, inspectors should inform the facility representative that all inspection results are preliminary and that the overall compliance status of the facility will be determined after review of inspection results with supervisory personnel and the issuance of an inspection report.

In conducting a closing meeting, it is essential that inspectors maintain a professional, courteous demeanor, even though the attitude of facility representatives may not be cordial. Because inspectors are often the only contact point between EPA or a state agency and the regulated industries, they should be keenly aware of opportunities to maintain and improve agency-industry relations. The closing conference provides a good opportunity for inspectors to offer various kinds of help to facility officials, within appropriate limits. Having just completed an inspection, inspectors will have first-hand knowledge of existing problems and solutions.

Improving Relations with the Regulated Community

- Discuss problems with facility officials and tactfully offer help and suggestions, as appropriate. Inspectors should limit their comments to relatively straightforward interpretations of rules and resolutions of problems. **They should avoid providing any advice or assistance that would prejudice the government's case in a subsequent enforcement action (e.g., making guarantees that the facility would come into compliance by performing certain actions, other than those specified verbatim in regulations).** Additionally, inspectors should be careful to avoid making suggestions that might imply that a "consultant" type of relationship exists with the owner/operator.

- Offer or suggest available resources to facility officials to help overcome specific problems or assist in their waste minimization

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efforts (e.g., Agency outreach materials, technical publications, special services available to industry, etc.).

Contact with a facility after an inspection can lead to gathering of additional information and demonstrate interest in the facility, but inspectors should exercise discretion in making such contacts. Contacts should serve enforcement or compliance objectives. It is important for inspectors, as industry relations representatives, to follow-up on deferred questions, referrals, and offers of help made during an inspection. These activities, within appropriate limits (which may be set by Regional or state policy), contribute towards achievement of a major enforcement objective: making regulated facilities come into, or maintain, compliance. Communicating through letter, phone call, or repeat visit indicates to facility officials that the regulatory agency is genuinely interested in assisting them achieve compliance (within appropriate limits), and that the agency is paying attention to their efforts, or inaction, in achieving or maintaining compliance.

Inspectors should never recommend a particular consultant or consulting firm to a facility, even if asked to do so. However, inspectors may recommend that a facility contact a professional society to obtain professional assistance.

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4.8 Summary

Although inspectors may exercise a certain amount of discretion in conducting an inspection, certain rules and procedures should be followed to ensure the required level of consistency and quality. Inspectors must at all times maintain a professional approach to their work, even in the face of difficult circumstances, and must concern themselves with detail.

Thorough information-gathering is central to any inspection effort and should occur during all phases of the inspection discussed in this chapter:

- Opening discussion
- Discussion of operations and waste handling
- Record review
- Visual inspection
- Documentation
- Closing discussion.

As the key link between EPA and state agencies and the regulated community, inspectors must also serve as an information source for facilities.

Upon completion of an inspection, and appropriate documentation of findings, an inspector is ready to prepare the inspection report, discussed in Chapter 5.

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5.0 Inspection Follow-Up

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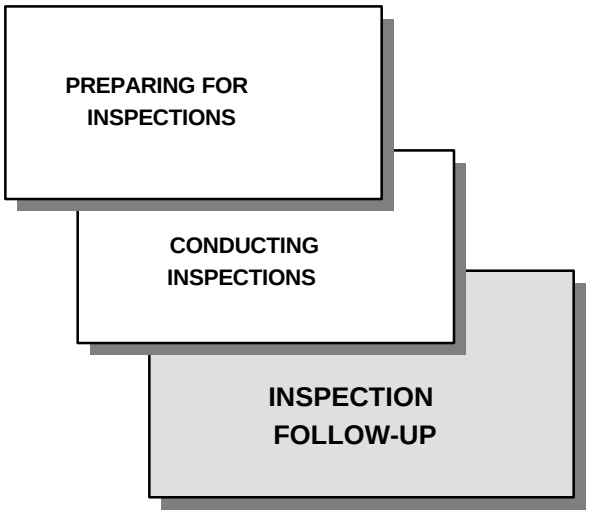

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5.1 Introduction

In this chapter, inspectors will be informed of critical steps in the final phase of inspection work—inspection follow-up. This includes preparation of the inspection report and related activities. As the culmination of inspectors' efforts, this phase must be undertaken in a consistent, thorough, and comprehensive manner.

To successfully complete inspection follow-up, inspectors must:

- Understand their objective(s)
- Be familiar with procedures that can help reach the objective(s)
- Include all relevant information in their reports and files
- Ensure that inspection files are as current as possible
- Perform in a manner consistent with applicable law.

All of these aspects of inspection follow-up will be thoroughly discussed below.

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5.2 Report Preparation

The **report package** that inspectors prepare following an inspection greatly impacts on the adequacy of follow-up to correct problems or deficiencies noted during an inspection. Inspectors must organize their reports in a manner that allows them and their supervisors to make maximum use of all information. It is also essential that inspectors complete their reports expeditiously so that results are available to support further enforcement actions, especially in situations where a facility has significant violations or where other offices plan activities related to an inspected facility. Specifically, inspection reports will support the following types of enforcement actions:

- Administrative actions (warning letters, administrative orders, etc.)
- Civil court actions
- Criminal court actions.

This Manual presents a general method for reporting inspection findings and conclusions. A recommended report format is included. Many Regions and states have preferred formats tailored to their own specific procedures and requirements, but in cases where inspectors may not have a specific model to follow, they will need to develop their own approach that meets all of the requirements outlined below.

Inspection reports <u>must</u> be well-written and should document all key facts because they may become the focal point for an enforcement action.

Objective

An inspection report should organize and coordinate all relevant information and evidence gathered during an inspection in a comprehensive and usable manner. To meet this objective, the information presented in an inspection report must be:

- **Accurate** — All information must be factual and based on sound inspection practices; observations should be the verifiable results of first-hand knowledge and must be objective and factual.
- **Relevant** — Information in an inspection report should be pertinent to the subject of the report; irrelevant data clutter a report and can reduce its clarity and usefulness.
- **Comprehensive** — The subject of a report (e.g., suspected violations) should be substantiated by as much factual, relevant information as possible.

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The more comprehensive the evidence is, the better and easier the case development process becomes.

- **Coordinated** — All information pertinent to the subject should be organized into a complete, well-organized, lucid package. Documentary support (photographs, photocopies, statements, sample analyses, etc.) accompanying the report should be clearly referenced so that any interested party reading the report gets a complete and clear overview of the subject. Additionally, the report should be neat and legible.

Report Preparation Procedures

Inspectors should follow **four basic steps** when preparing inspection reports, regardless of the specific nature of the elements/contents. Each of these steps is briefly described here:

Step 1: **Review Information:** When preparing a report, inspectors should gather all information developed during the inspection. More specifically, inspectors should assemble checklists, field notebooks, photos, maps, photocopies, and drawings and review the material for relevance and completeness. When gaps in information are discovered, inspectors should obtain necessary data by calling the facility representative or, in unusual circumstances, conducting a follow-up visit.

Step 2: **Organize Material:** Inspectors may organize their information in one of several ways, depending on the requirements of the agency the inspector represents. However, the report should always include each of the items mentioned in Step 1 above and should present the information in a logical, comprehensive manner. The narrative should be easily understandable (a cross-referencing system with the checklist can be useful).

Step 3: **Reference Accompanying Material:** Inspectors should clearly reference all documentary support that accompanies an inspection report so that any reader can easily locate relevant documents. Inspectors should check all documentary support for clarity prior to writing an inspection report.

Step 4: **Write the Narrative Report:** After gathering all appropriate information, inspectors can write the narrative section of the inspection report. The narrative report presents a factual record of the procedures used in the inspection and of the resulting findings. Using the field notebook as a guide for preparing the narrative report, inspectors should refer to the routine procedures and practices used during the inspection, but should describe in detail facts relating to potential violations and discrepancies.

Inspectors should reference any **confidential business information** included in the inspection report in a nonconfidential manner (i.e., by Document Control Number and a general description of the information contained in the document). Inspectors may also include the confidential information and treat the entire inspection report as a confidential document. If they select the latter alternative, inspectors must log the report with the

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Document Control Officer to ensure that only persons cleared for access are permitted to review it.

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5.3 Report Elements

Although the specific information about a facility that must be included in an inspection report will vary, **each report will usually be composed of three elements: narrative information, checklists, and documentary support.** Suspected violations must be documented through employment of these elements, each of which is described below.

Narrative Information

A **narrative discussion** of the facility inspected, its operations, and the findings of the inspection is a key element of an inspection report. The narrative should, at a minimum:

- Explain the overall nature of a facility's activities
- Discuss manufacturing and waste management operations at the facility
- Describe the generation and handling of wastes
- Describe apparent violations, and discuss the documentary evidence supporting a determination that a facility has a violation.

The narrative explains and supports findings presented in any inspection checklists included in the inspection report (discussed below). The narrative also may include recommendations for follow-up actions. A recommended outline for a narrative discussion is presented in Exhibit 5-1.

Inspectors should present narrative information in a simple manner.

Tips for Effective Narrative Discussion
• Use a simple writing style; avoid stilted language • Use active rather than passive voice (e.g., "I observed …" rather than "It was observed …") • Keep paragraphs brief and direct • Avoid repetition • Proofread the narrative carefully upon completion.

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Checklists

Checklists are designed to lead to the collection of standard reviewable information. They function as guides to ensure that inspectors collect all basic data. As discussed in Chapter 4 of this Manual, inspectors generally complete checklists as they progress through an inspection. In instances where checklist(s) require further clarification and elaboration, inspectors should use the information they recorded in their field notebooks and other information (e.g., from the inspection file) to expand upon checklist results in the narrative body of the inspection report. **Inspection checklists are only one component of a complete report**; they are not sufficient in and of themselves. The checklists that inspectors use and include in reports will vary according to individual state and Regional procedural requirements.

Documentary Support

Inspectors should include, as part of their inspection reports, all **documentation** that is intended to provide evidence of suspected violations. Such documentation may include: statements, photographs, photocopies, drawings and maps, printed matter, mechanical recordings, and copies of permits and records. The information that inspectors should record in field notebooks and on facility maps to document photographs is discussed in Chapter 4 of the Manual.

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Exhibit 5-1
Recommended Narrative Outline for Inspection Report

GENERAL INFORMATION	
Facility Information	(Name, Address, Telephone Number)
Facility Representative	(Name, Title)
Inspection Participants	(Name, Agency or Company)
Date of Inspection	
Applicable Regulations	40 CFR Parts 260-272
Purpose of Inspection	(Requested by ...; inspection of ...; sampling of ...; etc.)
State Coordination	(Assisted by ...; Copy of report to ...; Additional information obtained from ...)
Facility Description	(RCRA related activities, including operations, wastes generated, waste handling operations, etc.)
Violations Observed or Alleged	(Regulatory citation; nature of violation; evidence)
FOR GENERATORS	
General Standards for Generators	Parts 262.10 - 262.12 (Describe compliance with these standards)
The Manifest	Parts 262.20 - 262.23 (Establish existence of manifest records; assess adequacy with respect to regulatory requirements)
Pre-Transport Requirements	Parts 262.30 - 262.34 (Review packaging, labeling, marking, and placarding procedures for compliance with the regulations; establish compliance with accumulation time restrictions)
Recordkeeping and Reporting	Parts 262.40 - 262.43 (Establish existence of annual reports and additional reports)
Special Conditions	Parts 262.50 - 262.51 (Inspect for reports of international shipments of waste, and proper notification to the Administrator)

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Exhibit 5-1 (Continued)
Recommended Narrative Outline for Inspection Report

FOR TRANSPORTERS	
General	Parts 263.10 - 263.12 (Ensure that the transporter has obtained an EPA I.D. number and only stores waste at transfer facilities for fewer than 10 days)
Manifest System and Recordkeeping	Parts 263.20 - 263.22 (Establish existence of manifest records and compliance with manifest procedures)
Hazardous Waste Discharges	Parts 263.30 - 263.31 (Ensure that transporter is aware of responsibilities under these sections; check to see if any discharge reports have been made to the Department of Transportation as required by these regulations)
FOR TSDFs	
General Facility Standards	Parts 264/5.10 - 264/5.18 (Describe compliance with standards)
Preparedness and Prevention	Parts 264/5.30 - 264/5.37 (Check for required equipment and arrangements with local authorities)
Contingency Plan and Emergency Procedures	Parts 264/5.50 - 264/5.56 (Check records and procedures for adequacy with respect to the requirements of these sections)
Manifest System, Recordkeeping, and Reporting	Parts 264/5.70 - 264/5.77 (Establish existence of manifest records, operating record, annual report, and unmanifested waste report; assess adequacy with respect to regulatory requirements)
Groundwater Monitoring	Parts 264/5.90 - 264.99 or 265.94 (Examine ground-water monitoring plan and review results of sampling analysis)
Corrective Action Program	Parts 264.100 - 101 (Review status of corrective action program)
Closure and Post Closure	Parts 264/5.110 - 264/5.120 (Review closure and post-closure plans for adequacy with respect to regulatory requirements)
Facility Specific Standards	Parts 264/5.170 - 264.603 or 265.445 and Parts 264/5.1100 - 1102 (Depending upon the type of facility being inspected, establish compliance with the appropriate regulatory standard)
Permit Conditions	(For permitted facilities, review violations of specific permit conditions or schedules of compliance)

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5.4 Follow-Up Discussions And File Preparation

In many cases, inspectors will **brief their supervisors** on inspection results (particularly observed violations). Inspectors may also brief the Regional Case Development Officer (RCDO), equivalent state case development officer, or enforcement decision group on an inspection. These briefings may be given to:

- Assist in determining the need for possible enforcement action
- Answer questions about performance of the inspection
- Clarify inspection results to develop additional evidence in support of enforcement case development.

In addition to these briefings or discussions, inspectors may need to discuss results with other Regional or state personnel as appropriate.

Briefing Required?

- **Where inspectors have referred a facility representative to other Regional or state personnel for information or assistance.** These personnel should be contacted by the inspector and briefed about conditions at the facility and the types of questions that they should expect to receive.

- **Where a facility is subject to both federal and state enforce-ment, and inspectors observe potential violations at units not within their jurisdiction.** Inspectors should contact the Regional or state agency with enforcement authority over the unit(s) with violations. Regions and states may have policies concerning the need to consult with other agencies with which they share joint authority over hazardous waste management facilities; inspectors should become familiar with and follow policies applicable to their respective jurisdictions.

- **Where a facility has applied for a permit, or is operating under a permit, and where inspectors identify conditions that conflict with those presented in the permit application or required in the permit.** If a facility has applied for a permit, and conditions at the facility are not consistent with the application, inspectors should inform the permit writer of the conflicting conditions. If the facility has been permitted, and conditions are not consistent with the permit, the conditions may constitute violations unless a modification has been granted. In such cases, inspectors should confer with the permit writer on the observed conditions and any modifications which the facility may have applied for or

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discussed with the permit writer, prior to determining how to present these conditions in an inspection report.

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Preparing Inspection Files

Upon completion of an inspection report, inspectors should organize the report, supporting notes, and other documentary information into an **inspection file**. If inspection documentation includes confidential business information (CBI), inspectors should separate the information into two files, one non-confidential and the other confidential.

Properly organizing the inspection information into files so that material can be easily reviewed by inspectors or other interested Agency officials helps expedite review of inspection results to determine possible enforcement actions. For EPA inspections, inspection files are normally sent to RCDOs for review. The RCDO reviews the file in depth to determine the information's adequacy for purposes of supporting any necessary enforcement actions and substantiating elements of a violation. The result of the review will generally be a recommendation to proceed with an enforcement action or to dismiss violations as unworthy of prosecution. For state inspections, state inspection files may go through a similar review by comparable state enforcement personnel.

The non-confidential inspection file should contain the inspector's report and all forms of non-confidential documentation, which may include:

- Field notebooks
- Documents relating to sampling, as appropriate (e.g., custody records, analytical results)
- Photographs
- Drawings and maps.

Where necessary, inspectors may need to prepare a CBI inspection file. This file should include all CBI inspectors gather during an inspection, and the results of analyses for samples considered to be CBI. Inspectors should follow relevant procedures for logging CBI with Document Control Officers, or the state equivalent. The CBI inspection file can only be reviewed in accordance with RCRA CBI control and security procedures. For more information on CBI procedures, inspectors should review the RCRA Confidential Business Information Security Manual, available from the Office of Solid Waste, Office of Program Management and Support.

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5.5 Disclosure of Official Information

In addition to their inspection duties, **inspectors are responsible for making information available to the public.** This section describes how to handle requests for general information and the procedures for managing confidential business information.

Requests for Information

EPA's "open-door" policy on releasing information to the public strives to make information about EPA and its work freely and equally available to all interested individuals, groups, and organizations. In fact, EPA employees have both a legal and traditional responsibility for making useful educational and safety information available to the public.

This policy, however, does not extend to all information. When information related to suspicion of a violation, evidence of possible misconduct, or confidential business information is requested, personnel should immediately notify their supervisor and/or legal counsel. Representatives of state agencies may use EPA's policies on information disclosure as a guide in the absence of formal procedures of their own.

Inspectors should **clear any contacts with the press**, other communications media, and interested groups with their supervisor, Regional public affairs office, or state public affairs office, as appropriate. Inspectors should be familiar with and follow Regional or state policy regarding press relations.

In situations where inspectors or an inspection team are authorized to discuss activities with the press or interested groups, one person should be designated as the spokesperson to provide information concerning inspection responsibilities and investigative activities. Inspection teams should refer questions concerning investigation of alleged violations and enforcement policy to the EPA Regional Counsel or appropriate state enforcement staff attorney for response. In all contacts with the media, inspectors should be careful not to make careless or accusatory statements.

Confidential Business Information

All confidential information obtained will be identified as such and placed in a locked filing cabinet or safe. Only authorized personnel will be allowed access to the file. No copies of CBI will be made unless authorized in writing by the document control officer. Inspectors and other enforcement personnel have a responsibility to the submitters of RCRA CBI to maintain the confidentiality of such information. Personnel handling CBI are prohibited from disclosing, in any manner or to any extent not authorized by law, any RCRA CBI they have access to in the course of their employment or official duties. Requests for access to confidential information by any member of the public or by a state, local, or federal agency will be handled according to the procedure described in the Freedom of Information Act regulations (40 CFR 2). All requests will be referred to the responsible Regional organizational unit.

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Section 3001(b) of RCRA and 40 CFR 2.305(h) authorize EPA to furnish CBI to state agencies acting as authorized representatives of the United States in support of RCRA, provided the state agency has its own CBI procedures approved by EPA. State and Regional RCRA CBI procedures vary. Inspectors must become familiar with their specific procedures prior to obtaining CBI authorization access.

Confidential claims for RCRA should not be confused with confidential claims under other environmental laws (e.g., Toxic Substances Control Act).

Unauthorized disclosure of RCRA CBI may subject an employee to criminal penalties under 18 United States Code (USC) Section 1905. Violations of RCRA CBI procedures by employees may result in the revocation of CBI authorization access and/or further disciplinary action.

For more detailed information, inspectors should consult the RCRA Confidential Business Information Security Manual, Office of Solid Waste, U.S. EPA, Draft, March 1984.

Contract inspectors must provide the same degree of protection to RCRA CBI that EPA or an authorized state agency provides. Although the contractor protection of CBI must be equivalent to EPA, the nature of contracts is such that the specific procedures are somewhat different. Contract inspectors should first consult Contractor Requirements for the Control and Security of RCRA Confidential Business Information, Office of Solid Waste, U.S. EPA, March 1984.

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5.6 Summary

To ensure that all of their hard work preparing for and conducting an inspection has been worthwhile, inspectors must focus on all of the necessary follow-up work. This includes:

- Report preparation
- Follow-up discussions with appropriate personnel
- Preparation of an inspection file
- Appropriate handling of requests for information and CBI.

It is critical that reports and files be prepared in such a manner that they will be useful in future case development, inspections, and other activities.

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Appendix I

Keeping Up with Current RCRA Regulatory Concerns

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Appendix I

Keeping Up with Current RCRA Regulatory Concerns

I. Overview

Inspectors should keep up to date with changes in the RCRA regulations and requirements (or equivalent State regulations and requirements, as appropriate). The complete RCRA regulations are published annually in Title 40 of the Code of Federal Regulations (CFR). However, regulations amending or adding to the CFR may be promulgated by EPA at any time during the year; such amendments or additions are published in the Federal Register, which is published daily and can be reviewed in EPA Regional libraries.

The annual edition of the CFR includes all revisions made to the CFR that have been published in the Federal Register during the previous year. The annual revision of Title 40 of the CFR, which contains the RCRA hazardous waste regulations (40 CFR Parts 260-272), is usually available in January, and usually reflects changes to the regulations promulgated through July. Thus, the 1993 edition of Title 40 will appear in January, 1994, and reflect all amendments or additions made to the RCRA regulations through July 1, 1993.

Keeping up with changes to the regulations made during the year can be difficult. Here are some suggestions:

- To help interested parties keep track of newly promulgated or pending changes to the RCRA regulations (and other environmental standards), EPA issues a semi-annual listing of recently completed and pending regulatory actions. This listing, the "Semiannual Regulatory Agenda," is published in the Federal Register, usually in April and October of each year. The Agenda lists regulatory actions at the pre-rule, proposed rule, final rule, and completed action stages. Generally, actions at the final rule or completed action stage will be of most interest to inspectors. Actions at the final rule stage include regulations that EPA expects to promulgate as final rules within approximately one year; the Agenda provides a planned date of promulgation, a synopsis of the rulemaking, and an EPA Headquarters technical contact for the rule. Completed actions generally include recently promulgated regulations; the Agenda provides the date on which recently promulgated standards were published in the Federal Register and provides the Federal Register citation for the standards.

- EPA Headquarters also operates, with contractor assistance, the RCRA/Superfund Industry Assistance Hotline to answer questions anyone may have concerning

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RCRA. The Hotline can provide inspectors with up-to-date information on recently promulgated standards and send copies of regulations that have appeared in the Federal Register, as well as answer other questions concerning the RCRA program.

The Hotline number is:

- **Toll Free, 1-800-424-9346**
- **In the Washington, D.C. area, 703-412-9810**

Every month, the Hotline publishes the "RCRA-Superfund Industry Assistance Hotline Report," which provides information on regulations and guidance published during the preceding month, and discusses answers to particularly pertinent questions asked by Hotline users. This report may be obtained by EPA inspectors by request from:

U.S. Environmental Protection Agency
Office of Solid Waste
Office of Program Management and Support
WH-562
Washington, D.C. 20460

- A number of newsletters published by various services provide information on RCRA. These may be available in EPA Regional libraries or, by subscription, from the publisher.
- Another resource is the REDboard, completely managed by EPA RCRA Enforcement Division personnel. Current news from EPA Headquarters is posted as it becomes available. **Only EPA and state RCRA enforcement personnel are allowed access to the REDboard.** The REDboard has a number of features:
  - Allows for public or private messages to be sent to specific users, distribution lists, or to all users with immediate reply with quote available for question response
  - Ability to door out to a RCRA Trivia Challenge and State Callback feature, as well as three RCRA information databases
  - Ten different sub-boards on specific RCRA enforcement topics
  - Over 100 files available for downloading, including WordPerfect copies of 40 CFR updated through October 1992, Federal Register entries, monthly HOTLINE reports, inspection checklists, RCRA Inspector News Issues, and policy memoranda
- Full upload capabilties to allow Regions and states to share files.

The REDboard number is:

- **Toll Free, 1-800-260-8959**
- **In the Washington, D.C. area, 202-260-8959**

Modem settings: N,8,1

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II. RCRA Developments

Below, presented in alphabetical order by subject area, are brief discussions of recent and anticipated regulatory and Agency developments impacting on implementation of the RCRA program. Inspectors should be aware of all such information and are strongly advised to utilize all available resources to remain abreast of future developments. The discussions below are intended only to highlight important information; inspectors are encouraged to develop more detailed understandings.

As needed, this Appendix will periodically be updated to reflect significant events in the RCRA program about which inspectors should be aware. Topics covered include:

- Air Emissions Subpart CC
- Boilers and Industrial Furnaces
- Corrective Action Management Units
- Land Disposal Regulations
- Mining Waste
- Mixtures and Derived-From Rules
- OSHA/EPA Relationship
- Pollution Prevention
- Toxicity Characteristic
- Universal Wastes
- Used Oil
- Wood Preserving.

Air Emissions Subpart CC

The EPA proposed new standards and amendments to the existing air emission standards on July 22, 1991 (56 FR 33492). The proposed Subpart CC of 40 CFR 264 and 40 CFR 265 would apply to tanks, surface impoundments, containers, and miscellaneous units that contain VOCs at or greater than 500 ppmw. In addition, the proposed amendments would add relevant emission control requirements specified by the air emission standards under RCRA for certain TSDF treatment unit process vents, equipment tanks, and units to the requirements that a hazardous waste generator must comply with pursuant to 40 CFR 262.34(a). Generators will need to comply with these additional requirements to exempt certain accumulation tanks and containers from RCRA Subtitle C permitting requirements.

This proposed rule is expected to be finalized in the summer of 1993. A more in-depth discussion of current air emissions standards can be found at page III-160 below.

Boilers and Industrial Furnaces

Hazardous waste can be burned in boilers, industrial furnaces, and incinerators for specific purposes. Incinerators use controlled combustion to treat or destroy hazardous waste, and are regulated under 40 CFR Parts 264 and 265 Subpart O. Boilers and industrial furnaces (BIFs) that burn hazardous waste typically use controlled combustion to burn waste for energy or materials recovery, and have been minimally regulated by RCRA. However, in an effort to reduce and control the toxic pollutants from boilers and industrial furnaces, EPA promulgated final regulations on boilers and industrial furnaces in the February 21, 1991 Federal Register (56 FR 7134), with corrections and amendments appearing July 17, 1991 (56 FR 32688) and August 27, 1991 (56 FR 42504). An administrative stay of the application of the industrial furnace standards as they apply to coke ovens was published on September 5, 1991 (56 FR 43874). The hazardous waste burners affected by the BIF regulations include nonindustrial, industrial, and utility boilers; cement and

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light weight aggregate kilns; and halogen acid furnaces. The regulations found at 40 CFR Part 266, Subpart H, require BIFs to control emissions of toxic organic compounds by: setting a 99.99 percent destruction and removal efficiency standard for constituents in the waste; limiting stack gas carbon monoxide concentrations; and, in specific situations, limiting hydrocarbon concentrations in stack gas. The BIF regulations also require that particulate matter be held to a level of 0.08 gr/dscf and that ten toxic metal emissions as well as hydrogen chloride and chlorine gas emissions levels do not exceed site-specific limits.

Interim status facilities must have certified pre-compliance by August 21, 1991 and also must conduct compliance testing and certify compliance with the emissions standards by August 21, 1992. Permitted facilities were required to submit a Class 1 modification by August 21, 1992 and to submit a Class 3 modification request to EPA by February 21, 1992.

A new guidance document based on questions received by the Agency from the regulated community was published in March, 1992 and is entitled Technical Implementation Document for EPA's Boiler and Industrial Furnace Regulations (EPA-530-R-92-011).

For more in-depth information on current BIF regulations see page III-246 below.

Corrective Action Management Units

On February 16, 1993 (58 FR 8658), EPA finalized the corrective action management unit (CAMU) and temporary unit (TU) portions of the July 27, 1990 proposed corrective action rulemaking. The final rule promulgates standards which, when followed, allow the use of CAMUs for the purposes of managing remediation wastes without triggering the land disposal restrictions or minimum technology requirements. The TU portion of the rule allows tanks and containers located at the facility to manage remediation wastes for up to one year without being required to meet all of the relevant Part 264 and 265 standards. The specific standards the tanks and containers will have to meet will be decided by the Regional Administrator on a case-by-case basis. At this point these are the only portions of the proposed Subpart S standards to have been finalized.

For more in-depth information on current CAMU regulations see page III-226 below.

Land Disposal Regulations

Phases I and II

Known as Phase I, the final rule on the land disposal regulations (LDR) treatment standards for debris and 20 newly-listed wastes (F037, F038, K107-K112, K117, K118, K136, K123-124, K131-132, U328, U353, and U359) appeared in the August 18, 1992 Federal Register (57 FR 37194). At that time EPA established alternate treatment standards for debris that contain prohibited listed wastes or exhibit a prohibited characteristic. Under the final rule, debris may be treated prior to land disposal using specific technologies from one or more of the following families of debris treatment technologies in §268.45: extraction, destruction, or immobilization. EPA also finalized regulations which state that hazardous debris that is treated by an extraction or destruction technology and that no longer exhibits a hazardous characteristic will no longer be subject to regulation as a hazardous waste.

In addition, EPA finalized revisions to a number of current LDR treatment standards including: F001-F005; alternate treatment standards for F006 and K062 wastes and an extension of the K061 generic exclusion to F006 and K062 wastes treated by high temperature metal recovery (HTMR) and the simplification of the notification and certification rules for characteristic wastes in §268.9. Also finalized were regulations that establish a new waste management unit known as a

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containment building. When certain types of waste such as lead slags and spent potliners, are stored or treated in a containment building, this management will not constitute land disposal. Additionally, EPA deferred the expansion of the list of inorganic constituents in Part 261 Appendix VIII and did not include vanadium in the treatment standards.

The Phase II rulemaking on contaminated soil and newly identified wastes was discussed in the Advance Notice of Public Rulemaking in the October 24, 1991 Federal Register (56 FR 55160). The notice discusses different methods available to treat contaminated soil, such as biological treatment, soil washing, and vitrification. Also presented for comment were treatment standards for the toxicity characteristic waste codes D004-D043, F032, F034, F035, K088, and characteristic hazardous wastes generated by the mining and mineral processing industries no longer suspended by the Bevill Amendment, RCRA §3001(b)(3). The proposed rule on Phase II is expected in early 1993; the judicial deadline for a final rule is June, 1993.

Case-by-Case Extensions

1) On May 15, 1992 (57 FR 20766), EPA published a case-by-case extension for hazardous debris. This rule, effective May 8, 1992, approved a generic one-year extension of the LDR effective date applicable to all persons managing hazardous debris. In this action, all hazardous debris (as defined in the June 1, 1990 final rule (55 FR 22650) or the August 18, 1992 final rule (57 FR 37242) with several exceptions, received an extension. The exceptions include debris contaminated with listed solvent or dioxin waste covered by the §3004(e) prohibition and debris contaminated with non-liquid "California List Wastes" pursuant to §3004(d). For all other types of debris EPA determined that there was a lack of available treatment capacity and they were therefore granted an extension from the land disposal restrictions until May 8, 1993. While no further applications are required from persons granted an extension by this action, they are required to keep certain records and to meet certain other requirements to qualify for the extension per 40 CFR 286.5. Owners/operators could apply for an additional one-year extension on a site-by-site basis no later than November 8, 1992.

2) EPA granted a similar extension to the U.S. Department of Energy (DOE) in the May 26, 1992 Federal Register (57 FR 22024). The DOE case-by-case extension covers Third Third mixed wastes but does not include solvents, dioxins, and "California List Wastes" for which earlier treatment standards were set (51 FR 40572, 52 FR 25760). The mixed wastes from the 31 DOE facilities covered by this extension are not subject to the land disposal regulations effective May 8, 1992. While this decision is for one year, and will expire on May 8, 1993, EPA is considering the impact of granting a second extension.

3) On June 5, 1992, EPA took regulatory action to approve an extension of the LDR effective date applicable to owners/operators of secondary lead smelters who are engaged in the reclamation of lead-bearing hazardous materials. Published in the Federal Register on June 26, 1992 (57 FR 28628), this extension applies only to lead-bearing hazardous waste wastes placed in a staging area immediately prior to being introduced into a lead smelter. While no further applications are required from persons granted the extension of the action, they are required to keep certain records and meet other requirements as required by 40 CFR 268.5. This extension is effective until May 8, 1993.

4) In the October 20, 1992 Federal Register, under 40 CFR 268.5, EPA approved an interim final case-by-case extension of the LDR effective date, to May 8, 1993, applicable to all persons handling Third Third hazardous soil whose Best Demonstrated Available Technology (BDAT) is either incineration, retorting, or vitrification, and owners/operators handling Third Third soils contaminated with radioactive mixed waste. No further applications were required at that time from persons granted the extension. However, 40 CFR 268.5 does require such persons to

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comply with certain record keeping requirements and meet certain other requirements to qualify for the extension. This action was effective on October 13, 1992 and expires on May 8, 1993.

For more in-depth information on current LDR regulations see page III-278 below.

Mining Waste

Under RCRA, mining wastes from the extraction, beneficiation, and processing of ores and minerals are solid wastes. RCRA §3001(b)(3), the Bevill Amendment, had excluded these wastes from regulation as hazardous wastes until EPA made a final determination on the management of these mining wastes. Reports to Congress in 1985 and 1990 stated that it was EPA's determination that, overall, extraction and beneficiation wastes did not warrant regulation as hazardous wastes. All but twenty processing wastes will be managed under Subtitle C if they exhibit any characteristic of hazardous waste.

The final determination on the Bevill wastes appeared in the June 13, 1991 Federal Register (56 FR 27300). EPA determined that regulation under RCRA Subtitle C is inappropriate or unfeasible for all 20 of these wastes because the wastes exhibit no, or negligible, hazardous characteristics, pose low risks, or are not amenable to the requirements of Subtitle C. Eighteen of the wastes will become subject to the developing RCRA Subtitle D mining waste program. The remaining wastes—phosphogypsum and phosphoric acid process wastewater — were found not to be amenable to controls under either RCRA Subtitle C or D and will instead be addressed by a program developed under the authority of the Toxic Substances Control Act (TSCA).

The exclusion concerning these wastes is codified at 40 CFR 261.4(b)(7) and is discussed more fully at page III-8 below.

Mixtures and Derived-From Rules

EPA issued the final regulations regarding the mixtures and derived-from rules on May 19, 1980 (45 FR 33085), and has been applying them to hazardous waste ever since. However, these regulations were found to have been finalized without compliance with the necessary administrative procedures and, on December 6, 1991, the D.C. Circuit Court of Appeals vacated and remanded the mixtures and derived-from rules because EPA failed to provide adequate notice and opportunity for comment. EPA filed a petition with the D.C. Circuit Court of Appeals on January 21, 1992 for a rehearing and clarification of the Court's December, 1991 decision. On February 12, 1992, the Court denied EPA's petition regarding the remand but did not rule on the clarification. In response, EPA issued an interim final rule and a notice of proposed rulemakings on March 3, 1992 (57 FR 7628). The interim final rule continued the mixture and derived-from regulations at 40 CFR 261.3 without change except that this continuation was set to expire on April 28, 1993 unless EPA promulgated a new version of the rules prior to that date (see below).

On March 5, 1992, the Court denied, without issuing a written opinion, EPA's motion for clarification on the issue of retroactivity. As stated in the interim final rule, EPA's position is that the December 6, 1991 decision is not retroactive and is unaffected by the Court's March 5, 1992 action. Thus, the Agency's reinstatement of the mixtures and derived-from rules maintains, without interruption, the legal framework for regulation of hazardous waste originally established under RCRA. A discussion of current 40 CFR 261.3 can be found at page III-4 below.

On May 20, 1992 EPA published the Hazardous Waste Identification Rule (HWIR). The rule proposed several different options for modifying the hazardous waste identification regulations. These options consisted of the concentration-based exemption criteria (CBEC) and the enhanced characteristics option (ECHO) in which the toxicity characteristic would have been expanded.

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However, EPA decided not to move forward with the proposed HWIR, and withdrew the proposal in the October 30, 1992 Federal Register (57 FR 49280). EPA determined that a broad range of policy and technical issues were raised by the comments on HWIR, and that a new proposal was needed to assure that a rulemaking on these important issues had a sound technical basis. Consistent with this action, EPA also removed the so-called "sunset" provision from the mixture and derived-from rules in 261.3. The removal of the April 28, 1993 expiration date from the reinstatement of the mixture and derived-from rules appeared in the October 30, 1992 Federal Register (57 FR 49278).

OSHA/EPA Relationship

Background

EPA and OSHA have respectively been tasked with ensuring the health and safety of the environment and the United States' workforce through the use of laws and regulations. Although the duties assigned to each agency are generally quite distinct, there is also some overlap in their endeavors. Due to this overlap EPA and OSHA would like to work together to provide efficient and effective federal programs.

Specifically, EPA accomplishes its mission through standard setting and rulemaking, technical reviews, audits and inspections, licensing and permitting, and investigations and enforcement. As a complement to this, OSHA is responsible for enforcing the Occupational Safety and Health Act of 1970, to assure, so far as possible, every working man and woman in the nation safe and healthful working conditions. To achieve this mission, OSHA promulgates mandatory safety and health standards and conducts compliance inspections of workplaces to determine compliance with the Act and OSHA standards. When violations are observed, OSHA is authorized to issue citations, propose penalties, and require the abatement of hazards. OSHA is required to evaluate all state programs that may be established and provide concurrent federal OSHA enforcement when warranted.

Memorandum of Understanding

An interagency Memorandum of Understanding (MOU) was developed between EPA's Office of Enforcement and OSHA. This MOU was designed to institute a working relationship between the two offices, improve any associations that have been previously established, and optimize the exchange of information regarding the protection of both employees and the environment from harm. The MOU also aspires to improve the efforts of both EPA and OSHA in achieving their missions by defining each agency's respective area of responsibility and providing guidelines for coordination efforts. An infrastructure has been established for notification, consultation, and coordination between the two agencies.

Coordination

The MOU states that EPA and OSHA will coordinate efforts at every organizational level to develop training, engage in data exchange and technical and professional assistance, refer possible violations to the appropriate agency, and pursue other related issues concerning compliance and law enforcement. An annual work plan will be completed at the start of each fiscal year that will prioritize those issues to be addressed between the agencies and identify those facilities that may be jointly addressed.

Inspections

EPA and OSHA may conduct joint inspections when there is regulatory overlap. Such actions may be planned in the annual work plan that will identify such joint initiatives. Joint

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inspections may also be warranted following incidents subject to both EPA and OSHA regulations. If inspectors believe that a joint inspection may be required, they should check with their supervisors.

Referrals

Since EPA and OSHA inspections are generally conducted separately, inspectors must be aware of possible situations that may warrant a referral to the other agency due to possible violations. Complaints that are received by either agency will also be treated as referrals. A tracking system will be developed to manage referrals of possible violations or situations requiring inspection, follow-up, or evaluation by either agency as appropriate. EPA inspectors must not perform the role of the OSHA inspector, but should only refer witnessed worker health and safety problems to OSHA, and vice versa. An important point for inspectors to understand is that potential violations of RCRA health and safety regulations will be potential violations of OSHA regulations in almost all cases. It is the responsibility of RCRA inspectors and their management to refer potential violations to state or federal OSHA for subsequent follow-up.

Responses to referrals will be handled through investigations, as appropriate, following evaluation of the referenced report. The agencies must encourage employees to actively participate in the referral system. Periodically, representatives of the two agencies will meet to discuss the effectiveness of the referral system and make required alterations. Both agencies will monitor the progress of actions generated through the referral system. OSHA and EPA are responsible for encouraging the participation of state agencies in the referral program as well as the training and information-sharing described in the MOU.

Data Exchange

EPA and OSHA have agreed to exchange information relating to complaints, investigations, discovered violations, penalties, and other legal actions to ensure effective and coordinated interagency law enforcement. The methods of data exchange, whether computerized or by hard copy, will be established in a separate agreement.

Training

EPA and OSHA will cooperatively develop and conduct periodic training programs for each other's personnel in the regulations, goals, and general activities of each agency. This training will allow for better validation of referrals that are made.

Period of Agreement

The MOU will be in effect until (1) modified in writing by mutual consent or (2) terminated by either party with 30 days advance written notice. The MOU does not preclude either agency from entering into separate agreements, similar to this, that address other programs.

Inspectors should utilize the inspection protocol developed for the Task Force Report on On-Site Health and Safety Requirements at Hazardous Waste Sites. The protocol appears in Appendix IV under the heading "Health and Safety Checklist." The Task Force was conducted jointly by EPA and OSHA, with assistance from the authorized states. The protocol consists of a checklist, an employee interview guide, and a side-by-side analysis of RCRA and OSHA health and safety requirements.

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EPA and OSHA regulations both require health and safety training. However, there are some differences in the specific regulatory requirements. For example, RCRA requires a documentation of employee training, while OSHA requires employer certification of employee training. RCRA inspectors should refer to the analysis of EPA and OSHA regulations for further examples.

Pollution Prevention

On September 12, 1991, EPA published a policy statement entitled, "The Role of RCRA Inspectors in Promoting Waste Minimization" (OSWER Dir. 9938.10). This policy statement describes the activities that must be performed by RCRA inspectors to ensure that facilities are in compliance with the HSWA requirements as well as to outline how inspectors can encourage more pollution prevention at facilities. In sum, the role of the RCRA inspector is to:

- Determine compliance with the regulatory requirements associated with manifesting and reporting
- Review the waste minimization plans/programs of facilities to ensure that they are developed and implemented
- Inform generators of the benefits of waste minimization and the resources available to help them and give limited advice to facilities on obvious ways they can minimize their wastes.

More specifically, the inspector can and should undertake the following activities when conducting a facility inspection:

1. Verify that manifests have been certified by an authorized representative and that the waste minimization statements have not been altered. (In at least some Regions, if a manifest is not certified or if a waste minimization statement is deleted, the inspector should note this as a violation.)

2. Check the descriptions in biennial reports or annual export reports to ensure that they include:

    - A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated
    - A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years
    - Certification by the generator or authorized representative.

3. Confirm that the operating record of each permitted facility contains a certification by the permittee, made at least annually, that the permittee has a waste minimization program in place.

4. Determine whether there are additional waste minimization requirements in a facility's permit or in any binding enforcement orders or settlement agreements.

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5. Ask to see a written description of the facility's waste minimization program. If a written program description is not provided, ask for a verbal description of the waste minimization program. The failure to provide either a written or verbal description should be noted as a violation. While inspectors cannot judge the adequacy of a program, they should verify its existence.

6. Visually check for evidence that a waste minimization program is in place. Make a note of any waste minimization measures observed or indicate that none were observed in the inspection report (this can facilitate development of waste minimization provisions in enforcement settlements, as well as document an inadequate program).

7. Discuss the importance and benefits of a waste minimization program with the facility personnel.

8. Recommend and distribute waste minimization literature.

9. Refer the facility to the appropriate technical assistance program for more specific or technical information.

Inspectors are encouraged by the RCRA policy to provide non-technical, housekeeping advice to the facility on obvious ways to minimize waste (see OSWER Dir. 9938.10). However, inspectors should not serve as on-site consultants; rather, they should refer facility representatives to the appropriate technical assistance program for capital intensive or technically-advanced advice. Inspectors must be cautious in dispensing advice that could be construed as legal recommendations for compliance.

RCRA inspectors are encouraged to make use of the waste minimization inspection checklist as they deem appropriate (see Appendix IV). Below are listed policy and guidance documents to which EPA personnel may refer and/or to which they can refer facility representatives.

Policy and Guidance for Agency Personnel:

The Role of RCRA Inspectors in Promoting Waste Minimization, Policy Statement, (OSWER Dir. No. 9938.10)

EPA Pollution Prevention Strategy (FR 2/28/91)

Interim EPA Policy on the Inclusion of Pollution Prevention and Recycling Provisions in Enforcement Settlements, Memorandum from James M. Strock, 2/25/91

Guidance for Generators and TSDFs:

Draft Guidance to Generators on the Elements of a Waste Minimization Program, FR Vol. 54, No. 111, pages 25056 - 25057, June 12, 1989.

Waste Minimization: Environmental Quality With Economic Benefits, EPA 530-SW-90-044, April, 1990.

Facility Pollution Prevention Guide, EPA/600/R-62/088, July, 1992.

Waste Minimization In Metal Parts Cleaning, EPA/530-SW-89-049, August, 1989.

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Guides to Pollution Prevention:

The Pesticide Formulating Industry, EPA/625/7-90/004
The Paint Manufacturing Industry, EPA/625/7-90/005
The Fabricated Metal Products Industry, EPA/625/7-90/006
The Printed Circuit Board Manufacturing Industry, EPA/625/7-90/007
The Commercial Printing Industry, EPA/625/7-90/008
Selected Hospital Waste Streams, EPA/625/7-90/009
Research and Educational Institutions, EPA/625/7-90/010.

Pollution Prevention Information Clearinghouse. Telephone: 703/821-4800.

More information is available from pollution prevention contacts located in EPA Headquarters, Regional Offices, and State Technical Assistance Programs.

Toxicity Characteristic

On December 24, 1992 (57 FR 61542), EPA proposed a suspension of the Toxicity Characteristic (TC) rule (Hazardous Waste Codes D018 through D043) for three years for environmental media and debris contaminated by petroleum products released from sources other than RCRA Subtitle I-regulated underground storage tanks (USTs). This suspension would apply only in States that certify that they have in place effective authorities and programs to compel cleanup of non-UST petroleum product spills and control the disposition of wastes generated from such cleanup actions. The suspension would apply only to wastes generated from State-supervised or approved cleanup sites, and sites being remediated under Federal authorities. The suspension, if finalized as proposed, would be codified at 40 CFR 261.4(b)(11).

On February 12, 1993 (58 FR 8504) EPA proposed to take final action on the issue of the application of the TC rule to petroleum-contaminated media and debris generated during the corrective action of RCRA Subtitle I USTs. The Agency proposed to permanently exempt these wastes due to the fact that subjecting even a portion of these sites to Subtitle C requirements could overwhelm the hazardous waste permitting program and the capacity of existing hazardous waste treatment, storage, and disposal facilities as well as significantly delay UST cleanups. EPA studies also found that the regulations currently in place are capable of handling the waste in a safe and effective manner and that further regulation is not needed.

Universal Wastes

On February 11, 1993 (58 FR 8102) EPA proposed regulations which address the collection and handling of the regulated portions of universal hazardous waste streams. EPA describes universal wastes as commonly produced items which, previous to the TC rule, were not considered to be hazardous (such as nickel cadmium batteries and pesticides) and are typically destined for the municipal solid waste stream. The proposed rule includes procedures for adding new wastes to the streamlined collection system in the future and specifically discusses antifreeze and mercury-containing thermostats as possible additions. The regulations as proposed would add a new Part 273, Standards for Special Collection Wastes, and specifically addresses hazardous waste batteries (except spent lead-acid batteries managed under Part 266, Subpart G) and suspended and/or canceled pesticides that are recalled. The proposed Part 273 standards would affect generators, transporters, and other handlers of these wastes.

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Used Oil

The final rule addressing the listing of used oils that are disposed appeared in the May 20, 1992 Federal Register (57 FR 21524). The Agency promulgated a final decision not to list used oils destined for disposal, based primarily upon the finding that all used oils do not typically and frequently meet the technical criteria for listing a waste as hazardous. In addition, if a used oil that is destined for disposal exhibits a characteristic, it is already regulated as a hazardous waste under Subtitle C. The Agency also promulgated a final exemption from the definition of hazardous waste in 40 CFR 261.4(b)(15) for certain used oil filters. The filters that received the exemption are non-terne plated used oil filters that have been hot-drained to removed used oil (terne is an alloy of tin and lead). EPA decided to defer, at that time, a decision on listing and management standards for used oil that is recycled.

The final rule promulgating the listing decision for recycled used oil as well as the recycled used oil management standards appeared in the September 15, 1992 Federal Register (57 FR 41566). EPA determined that recycled used oil does not have to be listed as a hazardous waste because the used oil management standards identified elsewhere in the rule were adequately protective of human health and the environment. The management standards work on the presumption that used oil that is collected will be recycled and cover used oil generators, transporters and transfer facilities, collection centers and aggregation points, processors and re-refiners, burners, and marketers. The standards will be codified in 40 CFR Part 279, and are effective March 8, 1993 in states that have not received authorization to implement the RCRA program. States that are authorized to implement the RCRA program will continue to operate under the current program in 40 CFR Part 266, Subpart E until they amend their own regulations.

Wood Preserving

On December 6, 1990 (55 FR 50450), EPA promulgated a final rule that lists wastes from wood preserving processes as hazardous, making the management of these wastes subject to regulation under Subtitle C of RCRA. In the intervening months, the American Wood Preservers Institute requested that EPA stay or extend the requirements for drip pads at wood preserving facilities. In response to these requests and because of the Agency's concern that the standards were impractical, the Agency issued two administrative stays, the latest of which appeared in the February 18, 1992 Federal Register (57 FR 5859). This administrative stay was only for the "impermeability" requirement for drip pad surfaces (40 CFR 264.573(a)(4) and 40 CFR 265.443(a)(4)) and expired on October 30, 1992. The requirements that drip pads be installed and their surfaces be maintained crack-free were not changed by this stay. Thus, substantial containment of drippage from treated wood will continue.

The final rule modifying both the hazardous waste code listings F032, F034, and F035, and the technical standards for drip pads used to collect preservative drippage from treated wood appeared in the December 24, 1992 Federal Register (57 FR 61492). In this rule, the applicability of the waste code F032 was eliminated from wastes generated by wood preserving operations that previously used, but no longer use, chlorophenolic preservatives, provided that any wastewaters, process residuals, drippage, or spent preservatives generated by those operations are regulated as F034 or F035 wastes. Also modified were the drip pad requirements for new and existing drip pads. New drip pads are not required to be absolutely impermeable and may either use a coating and sealer, or a liner and leak detection with leak collection system as its barrier to contamination migration from the drip pad. The existing drip pad requirements were also modified to allow the use of a coating and sealer which is not absolutely impermeable.

On April 27, 1993 (58 FR 25706), EPA proposed to add another wood preserving waste to the list of hazardous waste from non-specific sources, the “F-list,” in 40 CFR 261.31. The proposed

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waste, F033, consists of process residuals and wastewaters that come in contact with protectant, discarded spent formulation, and protectant drippage from wood surface protection chemicals having an in-process formulation concentration of pentachlorophenate exceeding 0.1 ppm.

The current regulations as they pertain to wood preserving are discussed at page III-150 below.

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Appendix II

Glossary

Administrator	The Administrator of the United States Environmental Protection Agency, or his designee.
Administrative Action	A nonjudicial enforcement action taken by the Administrator (or his designee) or a State.
Administrative Order	An order issued by the Administrator (or his designee) to a violator of RCRA provisions that imposes enforceable legal duties; e.g., forcing a facility to comply with specific regulations. The four types of RCRA orders are compliance orders, corrective action orders, monitoring and analysis orders, and imminent hazard orders.
Administrative Procedures Act	Administrative Procedures Act (APA) is a Federal statute that provides standards for informing the public about the actions of Federal agencies and assuring them that their interests are properly protected.
Aquifer	Rock or sediment in a formation, group of formations, or part of a formation that is saturated and sufficiently permeable to transmit economic quantities of water to wells and springs.
Biennial Report	A report (EPA Form 8700-13A) submitted by generators of hazardous waste to the Regional Administrator, which is due March 1 of each even-numbered year. The report includes information on the generator's activities during the previous calendar year. The owner/operator of a treatment, storage, and disposal facility must also prepare and submit a biennial report on EPA Form 8700-1313.
Boiler	(1) An enclosed device using controlled flame combustion and having the following characteristics: (i) The unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases;

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Boiler (continued)

(ii) The unit's combustion chamber and primary energy recovery sections must be of integral design; to be of integral design, the combustion chamber and the primary energy recovery sections (such as waterwalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery sections are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. Process heaters and fluidized bed combustion units are not precluded from being boilers solely because they are not of integral design;

(iii) While in operation, the unit must maintain a thermal energy recovery efficiency of at least 60 percent, calculated in terms of the recovered energy compared with the thermal value of the fuel; and

(iv) The unit must export and utilize at least 75 percent of the recovered energy, calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feeding water pumps)

(2) A unit which the Regional Administrator has determined, on a case-by-case basis, to be a boiler, after considering the standards set forth in 40 CFR §260.32.

CERCLA

Acronym for the Comprehensive Environmental Response, Compensation, and Liability Act, passed in 1980 and commonly known as "Superfund." CERCLA gives the Federal Government the power to respond to releases, or threatened releases, of any hazardous substance into the environment as well as to a release of a pollutant or contaminant that may present an imminent and substantial danger to public health or welfare. CERCLA established a Hazardous Substance Trust Fund (Superfund), which is available to finance responses taken by the Federal Government.

CFR

Abbreviation for the Code of Federal Regulations, a document containing all finalized regulations.

Characteristics

The EPA has identified four characteristics of a hazardous waste: ignitability, corrosivity, reactivity, and toxicity**.** Any solid waste that exhibits one or more of these characteristics is classified as a hazardous waste under RCRA.

Civil Action

A law suit filed in court against a person who has failed to comply with statutory or regulatory requirements or an administrative order, or has contributed to a release of hazardous wastes or constituents. The four types of civil actions are compliance, corrective, monitoring and analysis, and imminent hazard.

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Closed Portion	That portion of a facility which an owner/operator has closed in accordance with an approved closure plan and all applicable closure requirements.
Closure	The act of securing a hazardous waste management facility or unit pursuant to the requirements of 40 CFR Part 264.
Compatibility	The ability of materials to exist together without adverse environmental effects or health risks. Primarily applied to waste fluid combinations and liner materials.
Compliance Order/Action	An order or action issued under Section 3008(a) of RCRA; it requires any person who is not complying with a requirement of RCRA to take steps to come into compliance.
Conditionally Exempt Small Quantity Generator	A generator that generates less than 100 kilograms of hazardous waste in a calendar month, and is therefore not subject to the handling procedures required under RCRA for that month.
Confidential Business Information	Any information, in any form, received by EPA, an authorized State, or an EPA contractor, from any (1) person, firm, partnership, corporation, or association; (2) local, State, or federal agency; or (3) foreign government, that contains trade secrets or commercial or financial information that has been claimed as confidential by the person submitting it, and that has not been determined to be non-confidential under the procedures set forth in 40 CFR Part 2.
Container	Any portable device in which material is stored, transported, treated, disposed of, or otherwise handled.
Contaminant	Any solute that enters the hydrologic cycle through human action.
Contingency Plan	A document setting out an organized and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents from a treatment, storage, or disposal facility that could threaten human health or the environment.
Corrective Action	Actions, required by law, undertaken by a treatment, storage, or disposal facility to alleviate potential or existing threats to human health and the environment posed by a release or threatened release of hazardous substances, wastes, or constituents at a site.
Corrective Action Order	An order EPA issues that requires corrective action under RCRA Section 3008(h) at a facility where a release of hazardous waste or constituents into the environment has occurred. Corrective action may be required beyond the facility boundary, and it can be required regardless of when the waste was placed at the facility.
Criminal Action	Prosecution by the U.S. Government or a State of any person(s) who have knowingly and willfully failed to comply with the law; such an action can result in the imposition of fines or imprisonment.

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Deep-Well Injection	The subsurface emplacement of fluids through a bored, drilled, or driven well, or through a dug well whose depth is greater than the largest surface dimension.
Designated Facility	A hazardous waste treatment, storage, or disposal facility which (1) has received a permit (or interim status) in accordance with 40 CFR Parts 270 and 124, (2) has received a permit (or interim status) from a state authorized in accordance with 40 CFR Part 271, or (3) is regulated under §261.6(c)(2) or Subpart F of Part 266, and has been designated on a manifest by a generator pursuant to §260.20. If a waste is destined for a facility in an authorized State which has not yet obtained authorization to regulate that particular waste as hazardous, then the designated facility must be a facility allowed by the receiving State to accept such waste.
Discharge or Hazardous Waste Discharge	The accidental or intentional spilling, leaking, pumping, pouring, emitting, or dumping of hazardous waste onto any land or into any water.
Disposal	The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or onto any land or into any waters so that any constituent thereof may enter the environment or may be emitted into the air or discharged into any waters, including ground waters.
Disposal Facility	A facility or part of a facility at which hazardous waste is intentionally placed into or on any land or into water and where the waste will remain after closure.
DOT	Department of Transportation -- DOT shares authority with EPA concerning the transportation of hazardous materials, including labeling, containment, and accident reporting requirements.
Drip Pad	An engineering structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.
Elementary Neutralization Unit	A device which (1) is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in §261.22, or they are listed in Subpart D of Part 261 only for this reason; and (2) meets the definition of tank, tank system, container, transport vehicle, or vessel as set forth in §260.10.
Endangered and-Threatened Species	Species whose populations are so reduced in number or whose range is so limited in geographic extent that further reduction in numbers or in size of available habitat could inalterably reduce the breeding success of the species and lead to subsequent extinction. These species are listed in Section 4 of the Endangered Species Act.
EPA Identification Number	The unique number assigned by EPA to each generator or transporter of hazardous waste and to each treatment, storage, or disposal facility.

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EP Toxicity A test, called the extraction procedure, that was used prior to the toxicity characteristic leaching procedure (TCLP). The test is designed to identify wastes likely to leach hazardous concentrations of particular toxic constituents into the groundwater or soil as a result of improper management.

Exception Report A report that must be submitted to the Regional Administrator by generators who transport waste offsite if they fail to receive a copy of the manifest, signed and dated by the owner/operator of the designated facility to which their waste was shipped, within 45 days of the date the initial transporter accepted the waste.

Existing Facility A facility which was in operation or for which construction commenced on or before November 19, 1980. A facility commenced construction if the owner/operator obtained the Federal, State and local approvals or permits necessary to begin physical construction and either (i) a continuous on-site, physical construction program had begun or (ii) the owner/operator entered into contractual obligations -- which could not be cancelled or modified without substantial loss -- for physical construction of a facility to be completed within a reasonable time.

Existing Portion The land surface area of an existing waste management unit, included in the original Part A permit application, on which wastes have been placed prior to the issuance of a permit.

Existing Tank System A tank system or component that is used for the storage or treatment of hazardous waste and that was in operation, or for which installation was commenced, on or prior to July 14, 1986. Installation will be considered to have commenced if the owner/operator had obtained all Federal, State, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either (1) a continuous on-site physical construction or installation program had begun or (2) the owner/operator entered into contractual obligations - which cannot be cancelled or modified substantial loss - for physical construction of the site or installation of the tank system to be completed within a reasonable time.

Facility All contiguous land, structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units; e.g., one or more landfills, surface impoundments, or a combination of them.

Fault A break in earth materials along which a measurable amount of movement has taken place.

Federal Register A document published daily by the Federal Government that contains proposed and final regulations.

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Final Closure	The closure of all hazardous waste management units at a facility in accordance with all applicable closure requirements so that hazardous waste management activities under Parts 264 and 265 are no longer conducted at the facility unless subject to the provisions in §262.34.
Final Status	Status acquired when final administrative disposition has been made of a treatment, storage, or disposal facility's RCRA Part B permit application.
Floodplain	The flat areas adjacent to stream channels covered by water during periods of flooding.
Food-Chain Crops	Tobacco, crops grown for human consumption, and crops grown to feed animals.
Freeboard	The vertical distance between the top of a tank or surface impoundment dike and the surface of the waste contained therein.
Generator	Any person, by site, whose act or process produces hazardous waste identified or listed in Part 261 or whose first act causes a hazardous waste to become subject to regulation.
Ground Water	Water below the land surface in a zone of saturation.
Ground-Water Flow	The direction of ground-water movement and of any contaminants it contains, governed primarily by the hydraulic gradient.
Ground-Water Quality	The ambient chemical, physical, and biological quality of ground water; generally defined by State and local standards to determine suitability as a drinking-water supply. Uncontaminated ground water's suitability as a drinking-water supply is generally based on its total dissolved solids (TDS) content.
Ground-Water Recharge	The addition of water to the ground-water system by natural or artificial processes.
Guidance	Documents issued primarily to elaborate and provide direction on the implementation of regulations.
Hammer Provision	Statutory requirements that go into effect automatically if EPA fails to issue regulations by certain dates specified in a particular statute.
Hazardous Waste	A solid waste or combination of solid wastes that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may a) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or b) Pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed.

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Hazardous Waste (continued)

As defined in the regulations, a solid waste is hazardous if it meets one of four conditions:

l) Exhibits a characteristic of a hazardous waste (40 CFR Sections 261.20 through 262.24).

2) Has been listed as hazardous (40 CFR Sections 261.31 through 261.33).

3) Is a mixture containing a listed hazardous waste and a nonhazardous solid waste (unless the mixture is specifically excluded or no longer exhibits any of the characteristics of hazardous waste).

4) Is not excluded from regulation as a hazardous waste.

Hazardous Waste Constituent

(1) A constituent that causes the Administrator to list the waste in which it is contained in Part 261, Subpart D, or (2) a constituent listed in Table 1 of §261.24.

Hazardous Waste Management Unit

A contiguous area of land on or which hazardous waste is placed, or the largest area in which there is a significant likelihood of mixing hazardous constituents in the same area. Examples include a surface impoundment, a waste pile, a land treatment area, and a tank system. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

HSWA

Abbreviation for the Hazardous and Solid Waste Amendments of 1984 (Public Law 98-616), which significantly expanded both the scope and coverage of RCRA.

Imminent Hazard Order

Used by a responsible agency, under the authority of RCRA §7003, to force any person contributing to an imminent and substantial endangerment to human health or the environment as a result of the handling of nonhazardous or hazardous solid waste to take steps to clean up the problem.

In Operation

Refers to a facility which is treating, storing, or disposing of hazardous waste.

Inactive Portion

That portion of a facility which is not operated after the effective date of Part 261.

Incinerator

Any enclosed device that (1) uses controlled flame combustion and does not meet the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, and is not listed as an industrial furnace; or (2) meets the definition of infrared incinerator or plasma arc incinerator.

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Industrial Furnace Any of the following enclosed devices that are integral components of manufacturing processes involving the recovery of materials or energy:

(1) Cement Kilns

(2) Lime Kilns

(3) Aggregate Kilns

(4) Phosphate Kilns

(5) Coke Ovens

(6) Blast Furnaces

(7) Smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machines, roasters, and foundry furnaces)

(8) Titanium dioxide chloride process oxidation reactors

(9) Methane reforming furnaces

(10) Pulping liquor

(11) Combustion devices used on the recovery of sulfur values from spent sulfuric acid

(12) Halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least 3%, the acid product is used in a manufacturing process, and except for hazardous wastes burned as a fuel, hazardous waste fed to the furnace has a minimum halogen content of 20% as-generated.

(13) Such other devices as the Administrator may, after notice and comment, add to this list on the basis of one or more of the following factors:

(i) The design and use of the device primarily to accomplish recovery of material products;

(ii) The use of the device to burn or reduce raw materials to make a material product;

(iii) The use of the device to burn secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;

(iv) The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;

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Industrial Furnace (continued)

(v) The use of the device in common industrial practice to produce a material product; and

(vi) Other factors, as appropriate.

Inner Liner

A continuous layer of material placed inside a tank or container to protect the construction materials of the tank or container from the contained waste or reagents used to treat the wastes.

Interim Status

A status classification that allows owner/operators of treatment, storage, or disposal facilities that existed or were under construction prior to November 19, 1980 to continue to operate without a permit after that date. Owner/operators of such facilities are eligible for interim status on an ongoing basis if the facility is in existence on the effective date of regulatory changes under RCRA that cause the facility to be subject to Subtitle C regulation. Owner/operators of facilities with interim status are subject to and must comply with the applicable standards in 40 CFR Part 265. Interim status is gained through the notification process and by submitting Part A of the permit application.

Landfill

A disposal facility or part of a facility where hazardous waste is placed in or on land and that is not classified as a land treatment facility, a surface impoundment, or an injection well.

Land Treatment

A facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface. Such facilities are disposal facilities if the waste remains after closure.

Leachate

Any liquid, including its suspended components, that has percolated through or drained from hazardous waste.

Liability

The state of being legally responsible for property damage or bodily injury caused during the operational, and closure or post-closure phases, of a hazardous waste management facility.

Liner

A continuous layer of natural or human-made materials beneath, or on the sides of, a surface impoundment, landfill, or landfill cell that restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

Listed Wastes

Hazardous wastes that have been placed on one of three lists developed by EPA: nonspecific source wastes, specific source wastes, or commercial chemical products. These lists were developed by examining different types of waste and chemical products to see if they exhibited one of the four characteristics in the statutory definition of hazardous waste, were acutely toxic or hazardous, or were otherwise toxic.

Manifest

The shipping document, EPA Form 8700-22, used to identify the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of treatment, storage, or disposal.

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Metric Ton	2200 pounds.
Monitoring	Methods used to inspect and collect data on a facility's operational parameters or on contiguous air, groundwater, surface-water, or soil quality.
Monitoring and Analysis Order	Used to evaluate the nature and extent of a substantial hazard to human health or the environment that exists at a treatment, storage, or disposal facility. It can be issued either to the current owner or to a previous owner/operator if a facility is not currently in operation or if the present owner could not be expected to have knowledge of the release potential.
MSDS	Material Safety Data Sheets. Standard information sheets that are provided by chemical manufacturers with their chemicals, identifying any hazards associated with the product and outlining ways to respond to accidental spills.
New Facility	A treatment, storage, or disposal facility that began operation on or before, or whose construction commenced after, November 19, 1980.
New Tank System	A tank system or component that will be used for the storage or treatment of hazardous waste and for which installation commenced after July 14, 1986; except for purposes of §264.193(g)(2), a new tank system is one for which construction commenced after July 14, 1986.
Offsite	The opposite of onsite (see "Onsite").
One-Hundred-Year Flood Plain	Areas adjacent to streams where the probability of flooding in any given year is one in a hundred.
Onsite or On Site	An onsite location is one on a particular property or on geographically contiguous property, which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing (as opposed to going along(the right(s)-of-way. Noncontiguous properties owned by the same person <u>but</u> connected by a right-of-way controlled by that person and to which the public does not have access is also considered onsite property.
Operator	The person responsible for the overall operation of a facility.
Owner	The person who owns a facility or part of a facility.
Part A	The first part of the two-part application which must be submitted by a treatment, storage, or disposal facility to receive a permit. It contains general facility information that is presented in a standard form.

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Part B	The second part of the two-part permit application, which includes detailed and highly technical information concerning the treatment, storage, or disposal facility in question. No standard form exists for Part B; the facility must submit information based on regulatory requirements.
Partial Closure	The closure of a discrete part of a facility in accordance with the applicable closure requirements of 40 CFR Parts 264 and 265. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell, or a pit while other parts of the same facility continue to operate or are placed in operation at some future time.
Post-Closure Requirements	Monitoring and maintenance requirements for closed HWM units throughout the post-closure care period; these are specified as part of facility-specific permit conditions.
Permit	An authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of Part 270 and Parts 271 and 124. A permit may be a permit by rule (§270.61). This does not include any permit which has not been the subject of final agency action, such as a draft permit or a proposed permit.
Permit-by-Rule	A provision of Subtitle C whereby a facility is deemed to have a RCRA permit if it is permitted under the Safe Drinking Water Act, the Clean Water Act, or the Marine Protection, Research, and Sanctuaries Act, and also meets additional Subtitle C requirements specified in 40 CFR Section 270.60.
Permit Requirements	Requirements in a RCRA permit, including ambient performance, design, and/or operating standards contained in the regulations that the owner/operator must meet in perpetuity in constructing, operating, closing, and caring for the facility.
Person	An individual, trust, firm, joint stock company, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body.
Point Source	Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft from which pollutants are or may be discharged. This term <u>does not</u> include return flows from irrigated agriculture.
Policy	A document that specifies operating policies that must be followed. They are used by program offices to outline the manner in which pieces of the RCRA program are to be carried out.
RCRA	Abbreviation for the Resource Conservation and Recovery Act of 1976. RCRA was amended by HSWA in 1980 and most recently on November 8, 1984.

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RCRIS	Abbreviation for the Resource Conservation and Recovery Act Information System, a database detailing RCRA facilities.
Regional Administrator	The highest ranking official in each of the 10 EPA Regions.
Regulation	The legal mechanism that spells out how a statute's broad policy directives are to be carried out. Regulations are published in the Federal Register and then codified in the Code of Federal Regulations.
Regulatory Compliance	Meeting the requirements of Federal or State regulations regarding facility design, construction, operation, performance, closure, and post-closure care.
Representative Sample	A sample of a universe or greater entity (e.g., waste pile, lagoon, ground water, or waste stream) that can be expected to exhibit the average properties of the universe or greater entity.
Resource Recovery	The recovery of material or energy from solid waste.
Self Implementing Regulations	Regulations mandated by Congress that are similar in nature to a "hammer" in that they take effect automatically on a certain date unless EPA has developed its own regulations to supersede them.
Soil Porosity	The ratio of the volume of the pores between soil particles to the volume of the soil itself. Soil porosity is a function of the particles' grade, size, and form or type (shape). Determines the soil's physical condition at different moisture levels and its ability to retard or accelerate water and contaminant movement.
Solid Waste	Refers to any garbage; refuse; sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. It does not include solid or dissolved material in domestic sewage; solid or dissolved materials in irrigation return flows; industrial discharges that are point sources subject to permits under the Clean Water Act; or special nuclear or byproduct material as defined by the Atomic Energy Act of 1954.
Solid Waste Disposal Act of 1965	First legislation related to Federal solid waste amended by HSWA in 1980 and 1984.
State	Any of the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.
State Hazardous Waste Plan	A scheme generated at the State level to deal with the management of hazardous waste generated, treated, stored, or disposed of within the State or transported outside the State.

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Statute	A law, as passed by Congress and signed by the President.
Storage	The holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.
Superfund	See "CERCLA."
Surface Impoundment	A facility, or part of a facility, that is a natural topographic depression, human-made excavation, or diked area formed primarily of earthen materials (although it may be lined with human-made materials), that is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and that is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.
SW-846	Reference number for "Test Methods for the Evaluation of Solid Waste, Physical/Chemical methods," a methods manual for the sampling and analysis of wastes.
Tank	A stationary device designed to contain an accumulation of hazardous waste; constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.
TCLP	An acronym for the toxicity characteristic leaching procedure test that replaced the EP toxicity test. It is designed to identify wastes likely to leach hazardous concentrations into groundwater as a result of improper management.
The Act	A shortened reference to the Resource Conservation and Recovery Act.
Thermal Treatment	The treatment of hazardous waste in a device that uses elevated temperatures as the primary means of changing the chemical, physical, or biological character or composition of the hazardous waste. Incineration is an example of thermal treatment.
Topographic Map	A map indicating surface elevations of an area through the use of contour lines. It also shows population centers and other cultural and land-use features, surface water drainage patterns, and forests. These maps enable quick identification of areas of slopes that are more suitable for sanitary landfills.
Totally Enclosed Treatment Facility	A facility for the treatment of hazardous waste that is directly connected to an industrial production process and that is constructed and operated in a manner that prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.
Transfer Facility	Any transportation-related facility, including loading docks, parking areas, storage areas, and other similar areas, where shipments of hazardous waste are held during the normal course of transportation.

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Transporter	Any person engaged in the offsite transportation of hazardous waste within the United States by air, rail, highway, or water, if such transportation requires a manifest under 40 CFR Part 262.
Treatment	Any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize it; to render it nonhazardous or less hazardous; to recover it; to make it safer to transport, store, or dispose of; or to make it amenable to recovery, storage, or volume reduction.
TSD Facility or TSDF	Abbreviation for treatment, storage, or disposal facility.
UN/NA Number	Hazardous material identification number assigned to chemicals, wastes, and other hazardous materials by DOT. Under DOT regulations, UN/NA numbers for all hazardous materials in a shipment must be listed on the shipping papers accompanying the shipments. For hazardous wastes, UN/NA numbers must be recorded on the Uniform Hazardous Waste manifest accompanying all hazardous waste shipments under item 11 of the manifest, as part of the DOT description of the waste. UN/NA numbers are listed by chemical or waste name in 49 CFR 172.101 and 102. Numbers bearing the prefix "UN" are associated with descriptions appropriate for international shipments as well as domestic shipments. Numbers bearing the prefix NA are associated with descriptions that are not recognized for international shipments, except to and from Canada.
Waste Management Practices	Refers to aspects of a facility's design, operation, and closure that ensure protection of human health and the environment while treating, storing, or disposing of hazardous wastes.
Waste Minimization	Refers to the reduction in the volume or quantity of hazardous waste by the waste generator, to the extent economically practicable.
Wastewater Treatment Unit	A device which (1) is part of a wastewater treatment facility that is subject to regulation under either §402 or §307(b) of the Clean Water Act; and (2) receives and treats or stores an influent wastewater that is a hazardous waste as defined in §261.3, generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in §261.3, or treats or stores a wastewater treatment sludge which is a hazardous waste.
Water Table	1) The upper limit of the part of the soil or underlying rock material that is wholly saturated with water; 2) the upper surface of the zone of saturation in ground waters in which the hydrostatic pressure is equal to atmospheric pressure.
Wetlands	Bogs, swamps, marshes, tidal flats, or other areas inundated by ground or surface water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

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Appendix III

Regulatory Requirements Synopsis and Inspection Procedures

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Introduction to the Regulatory Requirements Synopsis and Inspection Procedures Appendix

The following Tables present RCRA regulatory material that is critical for inspectors to understand. Each Table is comprised of two related components that should be read together. The RCRA regulations (40 CFR Parts 261 through 268) have been summarized in the Regulatory Requirements Synopsis which is presented on the left hand pages of the Table. Inspection procedures useful for verifying compliance with the regulations are presented on the right hand pages.

The Regulatory Requirements Synopsis is designed as a quick reference. Therefore, the summaries state only the key points of each regulation. Studying these key points is not a substitute for reading an entire regulation.

Where possible, the Inspection Procedures are presented in a bulleted format to identify important concerns and areas that might otherwise be overlooked. When an in-depth description of inspection procedures is necessary, a few detailed paragraphs are provided to clarify these circumstances.

Keep in mind that when permitted facilities are being inspected, the permit conditions drive the inspection. The inspection of permitted facilities is covered in depth in Chapter 3 of this manual.

Blank space has been left on many of the inspection procedure pages to allow for writing in additional inspection procedures about which an inspector may learn.

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TABLE III-1 IDENTIFICATION OF HAZARDOUS WASTE

Identification of Hazardous Waste

§261.2 Definition of Solid Waste

(a)(1) A solid waste is any discarded material that is not excluded.

(2) Discarded is abandoned (disposed of, burned, stored or treated prior to disposal), recycled, or inherently waste-like.

(c)(1) Recycled materials are solid wastes if they are used in a manner constituting disposal, such as applied on land or used in products applied on the land if that is not their ordinary manner of use.

(c)(2) Recycled materials are solid waste if they are burned to recover energy or used to produce a fuel.

(c)(3) The following materials are solid wastes when reclaimed: spent materials, listed sludges and by-products, and scrap metal.

(c)(4) Recycled materials are solid wastes if they are accumulated speculatively except for listed commercial chemical products.

(d) Inherently waste-like materials are solid wastes when recycled in any manner.

(e)(1) Recycled materials are not solid waste when they are used as ingredients in an industrial process or as effective substitutes for products, provided no reclamation is involved.

(f) Respondents in actions to enforce RCRA Subtitle C regulations must document claims that materials are not solid waste or are conditionally exempt.

§261.3 Definition of Hazardous Waste

(a)(1,2) A solid waste is a hazardous waste if it is not excluded and it meets any of the following criteria:

(i) Exhibits a characteristic(s) of hazardous waste identified in Part 261, Subpart C;
(ii) Is listed in Part 261, Subpart D;
(iii) Is a mixture of a solid waste and a listed hazardous waste that is listed solely because it exhibits a characteristic unless the mixture no longer exhibits the characteristic of the hazardous waste; or
(iv) Is a mixture of solid waste and specific listed wastes discharged under the Clean Water Act.

(b)(2) Is a mixture of a listed hazardous waste(s) and a solid waste;

(b)(3) Is a mixture of waste, when the waste exhibits any characteristics.

(c,d) Any solid waste generated from the treatment, storage, or disposal of a hazardous waste is a hazardous waste, unless it no longer exhibits any characteristics, or it has been delisted if it is derived from a listed waste.

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Inspection Procedures - Sections 261.2 and 261.3

- **Prior to an inspection, the inspector should be familiar with the processes occurring at the facility. The determination of what material is a hazardous waste subject to regulation under Subtitle C of RCRA is the essence of any inspection. While the generator must determine if a material is a hazardous waste, the inspector must substantiate the determination. Therefore, it is essential that the inspector know the definitions and exceptions for hazardous waste. Information on waste generation at specific industries should be consulted when needed.**

- **When making a hazardous waste determination under §261.3, the protocol in §262.11 needs to be followed. For example, when determining if a solid waste, which is not excluded, meets the definition of a hazardous waste, the generator must first determine if the solid waste meets the criteria of a listed waste. In other words, listings take precedence over characteristics.**

☞ **Also, see discussion under §262.11 on page III-31 (determining if a listed waste exhibits any characteristics for purposes of Part 268).**

- **During the inspection, the inspector should ask about the wastes that are typically generated during processes found onsite. The inspector should confirm that listed wastes are managed as hazardous waste and verify that generators have tested or apply their knowledge to wastes that are suspected of exhibiting hazardous characteristics. The inspector should be wary of generator determinations that materials are "recycled" or "not hazardous" unless documentation is provided. However, this documentation is not explicitly required in §261.2(f). Instead, it must be provided if a person is responding in an action to ensure implementation of RCRA Subtitle C regulations.**

- **Commercial chemical products are not considered solid wastes if the products are applied to the land or used as a fuel and either activity is considered an ordinary manner of use (§261.2(c)(l)(ii) and (c) (2)(ii)). This provision can extend beyond commercial chemical products listed in §261.33.**

When a recycling claim is made so that a material would not be considered a hazardous waste or a solid waste, the following questions can be asked by the inspector to establish a distinction between recycling and sham recycling or treatment:

- **Is the secondary material similar to an analogous raw material or product?**
- **What degree of processing is required to produce a finished product?**
- **What is the value of the secondary material?**
- **Is there a guaranteed market for the end product?**
- **Is the secondary material handled in a manner consistent with the raw material/product it replaces?**
- **Are the toxic constituents actually necessary (or of sufficient use) to the product?**

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Inspection Procedures - Sections 261.2 and 261.3 (continued)

- **Currently, there are two categories of waste considered inherently waste-like materials: 1) F020, F021 (unless used as an ingredient), F022, F023, F026, and F028; and 2) secondary materials added to a halogen acid furnace (HAF).**

- **The mixture rule in §261.3 states that a mixture of wastes that no longer exhibits a characteristic(s) is not considered a hazardous waste. However, certain acts of mixing wastes together may meet the broad definition of treatment. Treatment includes, for example, a method designed to change the physical composition of a material and to render it non-hazardous. Thus, while a generator may be falling under the hazardous waste definition criteria of §261.3, the generator may be required to obtain a treatment permit under certain circumstances.**

☞ Also, see discussions under:

- §262.34 (treatment in accumulation tanks or containers without a permit)
- Part 268 (dilution prohibition and waste analysis plan).

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Exclusions: Solid and Hazardous Wastes

§261.4 Exclusions

The following materials are not solid wastes:

(a)(1) Domestic sewage and mixture of domestic sewage and other wastes;
(2) Industrial wastewater point source discharges under the Clean Water Act;
(3) Irrigation return flows;
(4) Special nuclear or byproduct material;
(5) Materials subject to in-situ mining techniques;
(6) Pulping liquors that are reclaimed in a pulping furnace;
(7) Spent sulfuric acid used to produce virgin sulfuric acid;
(8) Secondary materials that are reclaimed and returned to the original process;
(9) Spent wood preserving solutions that are reclaimed and reused, and wood preserving wastewaters reclaimed and reused to treat wood; and
(10) Toxicity characteristic and listed hazardous coke by-product residues that are used in producing coke and coal tar.

The following materials are solid wastes but not hazardous wastes:

(b)(1) Household waste;
(2) Agricultural waste returned to the soils as fertilizers;
(3) Mining overburden returned to the mining site;
(4) Ash from combustion of coal or other fossil fuels;
(5) Drilling fluids and other wastes associated with the production of crude oil, natural gas, or geothermal energy;
(6) Wastes failing the TC test for chromium if the chromium is in the trivalent state and generated in the leather tanning and finishing industry;
(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals
(8) Cement kiln dust;
(9) Arsenical-treated wood or wood products failing the TC test for arsenic, used as intended and discarded;
(10) Petroleum-contaminated media and debris failing the TC test for D018 through D043 (newly identified organic constituents only) which are subject to corrective action under the Underground Storage Tank program described in 40 CFR Part 280;
(11) Injected ground water, failing the TC test for D018 through D043 only, from hydrocarbon recovery operations undertaken at a certain petroleum industry site until January 25, 1991;
(12) Reclaimed chlorofluorocarbon refrigerants; and
(15) Non-terne plated used oil filters that are not drained.

(c) Hazardous waste is not regulated if generated in a product or raw material storage tank, or in a manufacturing process unit until it exits the unit or until the unit ceases to operate for more than 90 days.

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Inspection Procedures - Section 261.4

- **The solid waste exclusion in §261.4(a)(1) applies to the hazardous waste when it first enters a sewer system that will mix it with sanitary sewage prior to treatment or storage at a POTW. If a hazardous waste is managed in containers before discharge to a POTW, then the waste is considered to be managed in RCRA-regulated units. The industrial wastewater point source discharge exclusion (§261.4(a)(2)) applies only to the actual point source discharge. If the wastewaters are collected, stored, or treated before discharge, then the waste is also managed in RCRA units.**

- **To qualify for the §261.4(a)(8) exclusion for secondary materials that are reclaimed and returned to the original process, four criteria must be met: 1) there is tank storage and the entire process is enclosed; 2) no controlled flame combustion; 3) materials are not accumulated over twelve months; and 4) the reclaimed material is not used to produce fuel or used in a manner constituting disposal.**

- **Currently, household waste is not considered hazardous waste (§261.4(b)(1)), regardless of whether the resulting ash from the incineration of the waste exhibits any characteristics in Part 261, Subpart C; this is because the Clean Air Act Amendments of 1990 established a two-year moratorium on ash from municipal energy recovery plants or incinerators. From November 1990 to November 1992, the ash will not be under RCRA Subtitle C jurisdiction, at the federal level.**

- **The mining waste exclusion (§261.4(b)(7)) extends to certain wastes resulting from the extraction, beneficiation, and processing of ores and minerals. In 1990, the exclusion for processing wastes was narrowed to include 20 specific waste streams. In July 1991, a regulatory determination was made to develop programs to manage these 20 excluded materials under RCRA Subtitle D or TSCA.**

- **On July 23, 1990, five mineral processing wastes that were formerly exempt from regulation under §261.4(b)(7) lost exempt status. These five wastes are now regulated as hazardous, if they exhibit a characteristic.**

☞ **Also, see discussion under §268.32 (LDR California list prohibitions do not apply).**

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Exclusions: Solid and Hazardous Wastes (continued)

§261.4 Exclusions (continued)

(d) Samples of solid waste or environmental media tested for characteristics or composition are not subject to hazardous waste regulation.

(e,f) Treatability study samples of hazardous waste are not subject to hazardous waste regulation.

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Inspection Procedures - Section 261.4 (continued)

Since the promulgation of the TC rule (§261.24), four exclusions or deferrals have been established:

- **Petroleum contaminated media and debris (§261.4(b)(10))**
- **Injected groundwater for hydrocarbon recovery operations (§261.4(b)(11))**
- **Reclaimed chlorofluorocarbon refrigerants (§261.4(b)(12))**
- **PCB fluids which are also TC hazardous (§261.8).**

The exclusions only apply to the 25 new organic constituents (D018-D043). For example, during a Part 280 underground storage tank corrective action, contaminated soil is exhumed. When tested, the soil is both TC hazardous for lead (D009) and benzene (D018). The soil, however, would only be classified as hazardous for its lead content, and the benzene content would be excluded under §261.4(b)(10).

Additionally, each of the above exclusions have specific criteria. For instance, the re-injected groundwater exclusion only apples to re-injections occurring at petroleum refineries, petroleum marketing terminals, petroleum bulk plants, petroleum pipelines, and petroleum transportation spill sites.

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CESQG

§261.5 Special Requirements for Hazardous Waste Generated by Conditionally Exempt Small Quantity Generators (CESQG)

(c) Hazardous waste that is not subject to regulation, or that is subject only to regulation under §§262.11, 262.12, 262.40(c), and 262.41, is not included in the quantity determination of Parts 261 through 266, 268 and 270, and is not subject to any of the requirements of those parts. Hazardous waste that is subject to the requirements of §261.6(b) and (c) and Subpart C, H, and F of Part 266 is included in the quantity determination of Part 261 and is subject to the requirements of Parts 262 through 266 and 270.

(d) In determining the quantity of hazardous waste generated, a generator need not include:

(d)(1) Hazardous waste when it is removed from on-site storage;
(d)(2) Hazardous waste produced by on-site treatment (including reclamation) of hazardous waste, so long as the hazardous waste that is treated was counted once; or
(d)(3) Spent materials that are generated, reclaimed, and subsequently re-used on-site so long as the materials have been counted once.

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Inspection Procedures - Section 261.5

Section 261.5 includes provisions for Conditionally Exempt Small Quantity Generators (CESQGs) who are exempt from Part 262 regulated generator status provided all the criteria in this Section are met.

Hazardous waste generators fall into three categories: Conditionally Exempt Small Quantity Generator (CESQG), Small Quantity Generator (SQG), and Large Quantity Generator (LQG). Generator categories are determined by monthly calendar count:

- CESQG = less than 100 kg/month of hazardous waste or less than 1 kg/month of acute hazardous waste

- SQG = greater than or equal to 100 kg/month but less than 1000 kg/month of hazardous waste

- LQG = greater than or equal to 1000 kg/month of hazardous waste and/or greater than or equal to 1 kg/month of hazardous waste and/or greater than or equal to 1 kg/month of acute hazardous waste.

The counting requirements in paragraphs (c) & (d) of §261.5 apply to <u>all three</u> categories of generators. All hazardous waste generated is counted except:

- Waste exempted under §§261.4(c) through (f), 261.6(a)(3), 261.7, or 261.8;

- Waste managed only in exempt §264/265.1 elementary neutralization units, wastewater treatment units, and totally enclosed treatment facilities as defined in §261.10 (Note: if any of these wastes are managed, for example, in containers, before being treated in one of these exempt units, then the waste <u>must</u> be counted);

- Waste managed in an exempt §261.6(c) recycling unit, <u>provided</u> that the waste is not first managed in other units (e.g., containers);

- Spent lead-acid batteries regulated under Part 266 Subpart G; and

- Used oil burned for energy recovery regulated under Part 266 Subpart E.

If a waste does not fall within one of the five exceptions above, then the waste needs to be counted. If recycling is taking place at a site, then an inspector needs to pay close attention to the counting activities of a generator. For example, still bottoms from solvent recycling do not need to be counted if the solvent waste entering the §261.6(c) unit had already been counted (because the waste had been managed in a regulated unit, prior to entering the §261.6(c) recycling unit). On the other hand, if the solvent waste had not been counted because it was not stored in regulated containers, the still bottoms would have to be counted after exiting the recycling unit.

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Recyclable Materials

§261.6 Recyclable Materials

(a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities set forth in (b) and (c) below except for the materials listed in (b) and (c).

(a)(2) The following recyclable materials are not subject to requirements of this Section but are subject to Part 266 and all applicable provisions in Parts 270 and 124:

(a)(2)(i)	Used in a manner constituting disposal (Subpart C);
(a)(2)(ii)	Hazardous waste burned for energy recovery in boilers and industrial furnaces (Subpart H);
(a)(2)(iii)	Used oil burned for energy recovery (Subpart E);
(a)(2)(iv)	Reclaimed for precious metals (Subpart F); and
(a)(2)(v)	Reclaimed spent lead-acid batteries (Subpart G).

(a)(3) The following recyclable materials are not subject to regulation under RCRA:

(a)(3)(i)	Industrial ethyl alcohol that is reclaimed unless otherwise specified in an international agreement in §262.58;
(a)(3)(ii)	Used batteries returned to a battery manufacturer for regeneration;
(a)(3)(iii)	Used oil that exhibits one or more of the characteristics of a hazardous waste that is recycled in some manner other than burned for energy recovery;
(a)(3)(iv)	Scrap metal;
(a)(3)(v)	Fuels produced from the refining of oil-bearing hazardous wastes;
(a)(3)(vi)	Oil reclaimed from hazardous waste resulting from petroleum refining, production, and transportation practices;
(a)(3)(vii)	Coke and coal tar from the iron and steel industry that contains K087;
(a)(3)(viii)(A)	Hazardous waste fuel produced from oil bearing hazardous wastes from petroleum activities where the waste is reintroduced into a process that does not use distillation, or does not produce products from crude oil, so long as the resulting fuel meets oil specification in §266.40(e) and no other hazardous wastes are used to produce the fuel;
(a)(3)(viii)(B)	Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum activities, where the waste is re-introduced into a refining process and the fuel meets the specification in §266.40(e);
(a)(3)(viii)(C)	Oil reclaimed from oil-bearing hazardous waste from petroleum activities which is burned as a fuel without re-refining, provided the oil meets the used oil fuel specification; and
(a)(3)(ix)	Petroleum coke produced from petroleum refinery wastes containing oil at the same facility at which the wastes were generated, unless the coke product exhibits a hazardous waste characteristic.

(b) Generators and transporters of recyclable materials are subject to Parts 262 and 263, except as provided in (a) above.

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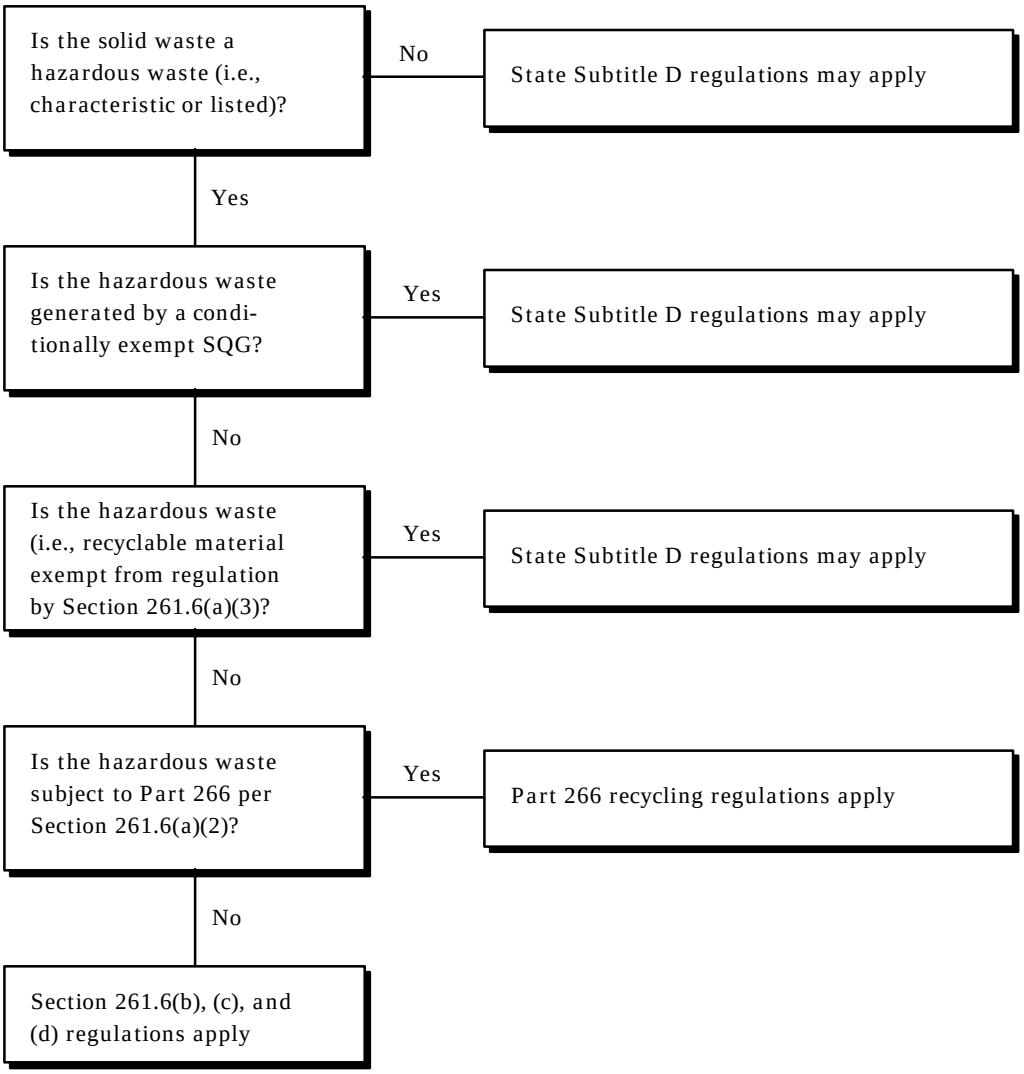
Inspection Procedures - Section 261.6

If a recyclable hazardous waste does not meet the criteria found in (a) (2) or (3) of §261.6, then the waste is subject to the applicable requirements of (c) and (d). An example of such a waste would be a solvent distillation unit. According to (c) and (d), the solvent wastes would be stored and transported as hazardous waste. The recycling unit itself is exempt from RCRA regulation (i.e., it is not a permitted Part 264 treatment unit). The recycling unit, however, may be regulated by another statute such as the Clean Air Act). Additionally, if the solvent distillation unit is located at a Part 264/265 TSDF, it may be regulated under air emission regulations of subparts AA and BB of Part 264/265 (see §261.6(d)).

What Regulations Apply to Recycling?



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Recyclable Materials (continued)

(c)(1) Owners/operators of facilities that store recyclable materials before they are recycled are regulated under applicable storage permitting regulation in Parts 264 and 265, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation except as provided in §261.6(d)).

(c)(2) Owners/operators of facilities that recycle without first storing are subject to the following, except as provided in (a) above:

(c)(2)(i, ii, iii) Notification requirements; §§265.71 and 265.72 (manifest use and discrepancies); and §261.6(d).

(d) Owners/operators of facilities with recycling units subject to RCRA permitting requirements are also subject to the requirements of subparts AA and BB of Parts 264 and 265.

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Containers

§261.7 Residues of Hazardous Waste in Empty Containers

(a)(1) Any hazardous waste remaining in an empty container or an inner liner, as defined as empty in (b) below, is not subject to hazardous waste regulation.

(a)(2) Any hazardous waste in either a container that is not empty or an inner liner removed from a container that is not empty is subject to hazardous waste regulation.

(b)(1) A container or an inner liner is empty if:

(b)(1)(i) all wastes have been removed using commonly employed practices, and

(b)(1)(ii,iii) no more than 25 centimeters (one-inch) of residues remains on the container bottom or liner, or no more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.

(b)(2) A compressed gas container is empty when the pressure approaches atmospheric.

(b)(3) A container or liner that held an acute hazardous waste is empty if:

(b)(3)(i,ii,iii) it has been triple rinsed using a solvent, or cleaned by method that is equivalent, or the inner liner prevented contact with commercial chemical product and it has been removed.

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Inspection Procedures - Section 261.7

Key Considerations:

- **Has the waste been removed by all commonly employed practices (for example, spilling, pouring, pumping, etc.)? If it has been, does the container have no more than one inch of residue remaining?**

- **If the residues in an "empty" container are subsequently exhumed and managed, §261.7 exempts the resulting material from hazardous waste regulation, including the requirement to determine if the solid waste exhibits a hazardous characteristic under Part 261 Subpart C.**

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PCBs

§261.8 The disposal of PCB-containing dielectic fluid, and electrical equipment containing such fluid, regulated under 40 CFR Part 761 and that are hazardous only for TC (DO18-DO43) are exempt from hazardous waste regulation.

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Inspection Procedures - Section 261.8

Key Considerations:

- **Is the PCB component of the waste regulated under TSCA, 40 CFR Part 761?**

- **By themselves, PCBs are not RCRA hazardous wastes; instead, they are regulated under the Toxic Substances Control Act (TSCA). However, under two circumstances, PCB wastes can become RCRA hazardous wastes:**

  -- **PCBs can be mixed with a listed hazardous waste and thus become regulated under the mixture rule (§261.3(a)(2)(iv))**

  -- **PCBs can exhibit a characteristic of a hazardous waste and thus be regulated under RCRA, unless the waste meets the §261.8 exclusion.**

A PCB waste that is hazardous solely because it contains one of the organic constituents covered by the TC rule — D018-D043—is not considered to be a RCRA hazardous waste. The reasons for this exemption is that PCBs are generally found in the presence of chlorobenzene, which is a TC constituent. EPA does not want all PCB wastes to become subject to the RCRA regulations because TSCA requirements provide adequate safeguards for managing these wastes.

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Characteristics of Hazardous Waste

§261.20 General

(a) A solid waste, as defined in §261.2, if not excluded by §261.4(b), is a hazardous waste if it exhibits the characteristics of ignitability, corrosivity, reactivity or toxicity.
(b) A hazardous waste which is identified by a characteristic must be assigned every applicable EPA Hazardous Waste Number in 40 CFR Part 261 Subpart C.
(c) Appendix I of 40 CFR Part 261 contains suggested representative sampling methods; however a person may employ an alternative method without formally demonstrating equivalency.

§261.21 Characteristic of Ignitability (D001)

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste is:

(1) A liquid having a flashpoint of less than 140 degrees Fahrenheit (60 degrees Centigrade);
(2) A non-liquid which causes fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently it creates a hazard;
(3) An ignitable compressed gas; or
(4) An oxidizer.

§261.22 Characteristic of Corrosivity (D002)

(a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste is:

(1) Aqueous, with a pH less than or equal to 2, or greater than or equal to 12.5; or
(2) Liquid and corrodes steel at a rate greater than 6.35 mm per year when applying a National Association of Corrosion Engineers Standard Test Method.

§261.23 Characteristic of Reactivity (D003)

(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste:

(1) Is normally unstable and readily undergoes violent change;
(2) Reacts violently with water;
(3) Forms potentially explosive mixtures with water;
(4) Generates toxic gases, vapors, or fumes when mixed with water;
(5) Is a cyanide or sulfide-bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors, or fumes;
(6) Is capable of detonation or explosion if subjected to a strong initiating source of if heated under confinement;
(7) Is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or
(8) Is a forbidden explosive as defined by DOT.

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Inspection Procedures - Sections 261.20 through 261.24 (Subpart C)

BE FAMILIAR WITH PROPER METHODS OF MEASURING AND DETECTING CHARACTERISTICALLY HAZARDOUS WASTE:

- **Ignitability**

  -- Ignitable liquids must be identified through use of the test methods specified in §261.21 (a)(1) or equivalent EPA approved methods (or application of generator's knowledge, as allowed by §262.11 (c)(2)).

  -- Aqueous solutions (defined as wastes with a liquid phase containing more than 50 percent water) containing concentration of alcohol less than 24 percent by volume, are excluded from the characteristic of ignitability. These substances (e.g., wine and latex paint) may flash at less than 140 degrees Fahrenheit but do not sustain combustion.

  -- Examples of wastes that tend to exhibit the characteristic of ignitability are solvents, fuels, sodium nitrate, methane gas, and stillbottoms from plastic manufacturing.

- **Corrosivity**

  -- Only waters that are liquid or contain liquid may exhibit the characteristic of corrosivity; solids cannot meet the RCRA characteristic of corrosivity. EPA Method 9095, the Paint Filter Liquid Test (or an equivalent method), may be used to demonstrate the presence or absence of free liquids in a waste.

  -- Common corrosives are caustic soda and nitric acids.

- **Reactivity**

  -- EPA relies heavily on a descriptive definition of reactivity, because available measures and tests suffer from a number of deficiencies.

  -- Cyanide- or sulfide-bearing wastes, however, exhibit the characteristic of reactivity (§261.23(a)(5)) if they generate the following quantities of toxic gases when exposed to pH conditions between 2 and 12.5: 250 mg. Hydrogen Cyanide gas per kg. of solid waste (measured using Method 9010); 500 mg. of Hydrogen Sulfide per kg. of solid waste (measured using Method 9030).

- **Toxicity**

  -- The toxicity characteristic replaced the EP toxicity test for LQGs and TSDFs on September 25, 1990, and became effective for SQGs on March 29, 1991. Since the TC brought 25 new organic compounds under the purview of the RCRA regulations, many facilities are managing newly regulated waste streams. The TC regulatory impact analysis estimated that 740 million metric tons per year of waste may require new management practices because they exhibit the TC. (However, 99% of this waste is wastewater, which is expected to be managed in tanks exempt from permitting). The inspector should become familiar with the toxicity characteristic constituents to ensure that all hazardous waste streams are identified.

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Characteristics of Hazardous Waste (continued)

§261.24 Toxicity Characteristic (D004-D043)

(a) A solid waste exhibits the characteristic of toxicity if the extract of a representative sample of the waste contains any of the contaminants listed in Table 1 in 261.24, at or above the specified regulatory levels. The extract should be obtained through use of the Toxicity Characteristic Leaching Procedure or an equivalent approved method. If the waste contains less than .5 percent filterable solids, the waste itself, after filtering, is considered to be the extract.

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Inspection Procedures - Sections 261.20 through 261.24 (Subpart C) (continued)

-- Method 1311, the Toxicity Characteristic Leaching Procedure (TCLP), is used to obtain the extract from wastes containing .5% or more of filterable solids. The TCLP is also required when measuring compliance with the LDR treatment standards in Part 268. For purposes of waste identification, the constituent concentration in the waste extract must be compared with the levels in Table 1 of §261.24, and should not be confused with the LDR concentration levels and regulatory requirements.

-- Rather than having the TCLP performed, generators commonly perform a total analysis of the waste, and then apply the 20 fold dilution factor inherent in the TCLP method. If this analysis of the waste and rule of thumb calculation demonstrates that individual analytes are not present in the waste, or that they are present in such low levels that the regulatory levels could not be exceeded, the TCLP need not be run. Generators should be advised to perform the TCLP if total analysis results are close to the regulatory limit for a constituent. Since this calculation assumes a 100% extraction efficiency of the TCLP, it represents a conservative assumption that the waste is not TC hazardous. Note that this calculation is only used for materials that are in a solid form since liquids themselves (i.e., wastes containing less than 0.5% dry solid material) are defined as the TCLP extract; hence, the 20-fold dilution factor calculation is not relevant.

-- If o-, m- and p-Creosol (D023-25 respectively) concentrations cannot be differentiated, the total creosol (D026) concentration is used.

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Listings

§261.31 Hazardous Wastes from Non-Specific Sources ("F-list") - See 40 CFR

§261.32 Hazardous Wastes from Specific Sources ("K-list") - See 40 CFR

§261.33 Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues thereof.

The following ("P and U-listed") materials are hazardous wastes when discarded, applied to the land, or produced, distributed, or burned for use as a fuel, if that was not their intended use:

(a) Any commercial product or manufacturing chemical intermediate having the generic name listed in this section;

(b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if on-specification, would have the name listed in this section;

(c) Residues remaining in a container or inner liner from a container that held a listed commercial chemical product, unless the container is empty pursuant to §261.7(b); and

(d) Residue or contaminated media or debris resulting from the cleanup of a spill of any of the substances delineated in (a), (b), or (c) above.

(e) The "P-list" of commercial chemical products consists of acute hazardous wastes, and are subject to the quantity limitations for acute hazardous wastes.

(f) The "U-list" of commercial chemical products are toxic wastes unless otherwise designated.

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Inspection Procedures - Sections 261.31 through 261.33 (Subpart D)

A subset of the wastes listed in Subpart D are the acutely hazardous wastes, which are listed in accordance with the criteria set forth in §261.11 (a)(2). The acutely hazardous wastes are FO20-23, FO26, and FO27 (these are dioxin-bearing wastes, and are designated by an "H" in the hazard code column), and all the P-listed wastes. Inspectors should be aware that a generator that produces more than 1 kg. of acutely hazardous waste per calendar month is subject to LQG status.

The FOO1-FOO5 listings apply to spent solvents used for their solvent properties (to solubilize or mobilize constituents). Listed solvents which are used as reactants or ingredients in commercial chemical products should not be designated as spent solvents. The FOO1, FOO2, FOO4 and FOO5 listings include solvent blends or mixtures containing 10 percent or more listed solvents by volume prior to use. The FOO3 listing does not have a 10 percent threshold. Waste mixtures containing FOO3 constituents in any amount, combined with 10 percent or more of FOO1, FOO2, FOO4 or FOO5 constituents prior to use, receive the FOO3 listing. Solvent mixtures with solvents from more than one waste code are classified with as many codes as appropriate (e.g., FOO1/FOO5).

The P- and U-listings apply to unused commercial chemical products (CCP), including technical grades and all formulations in which the chemical is the sole active ingredient (see the comment following 40 CFR 261.33 (d)). "Sole active ingredient" is defined as the compound or mixture that performs the function of the product. It is possible for a P- or U-listed hazardous constituent to be a functionally inert component of a CCP, such as a solvent carrier. In these cases, its presence does not prevent the formulation containing another P- or U-listed constituent from carrying that listing. Dilution with water is not considered use of a CCP, and would not cause a CCP to lose its listing, should the unused CCP/water mixture be discarded.

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TABLE III-2 GENERATOR REGULATORY REQUIREMENTS

Hazardous Waste Determination

§262.11 Hazardous Waste Determination

The generator must determine whether a solid waste, as defined in §261.2, is hazardous by determining if the waste:

(a) Is excluded under §261.4;
(b) Is listed as hazardous in Part 261 Subpart D;
(c) Meets a characteristic(s) in Part 261, Subpart C, either by testing or applying knowledge, and for purposes of Part 268, determine if the listed waste exhibits a characteristic(s).

(d) If the waste is determined to be hazardous, the generator must refer to Parts 264, 265, and 268 for possible exclusions or restrictions pertaining to the waste.

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Inspection Procedures - Section 262.11

Identifying Hazardous Wastes

Solid Waste?	Excluded?	Listed?	Characteristic?	Hazardous Waste?
YES	NO	YES		YES
YES	NO		YES	YES
YES	NO	YES	YES	YES
YES	YES			NO
NO				NO

Note: The above chart does not include the requirement, for purposes of Part 268, to identify characteristics in listed wastes.

For purposes of determining applicable treatment standards for a restricted LDR waste, a generator must determine if a listed waste exhibits any characteristics (§262.11(c)). Then, the generator must determine if the listed waste treatment standard specifically addresses the characteristics. However, for purposes of Part 262 recordkeeping requirements (e.g., biennial reports and 8700-12), the generator need not determine if a listed waste exhibits a characteristic. For example, F005 is listed for both toxicity and ignitability. For a hazardous waste determination for purposes of Part 262, the waste would be F005 (not F005/D001). For purposes of treatment standards in Part 268, the waste would be considered both F005/D001, because the F005 treatment standard does not specifically address the characteristic of ignitability.

☞ **Also, see discussion under §268.7 (identifying characteristics of listed wastes).**

The determination of a waste code for a specific waste stream is critical. An inspector needs to carefully consider the origins of the waste, and the applicability of the proper waste code. The following example illustrates this point. It is possible for benzene to meet the criteria of:

- **A commercial chemical product (U019)**
- **A spent solvent (F005)**
- **A constituent in specific source wastes (K-listed codes)**
- **A characteristic waste (D018).**

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General Requirements and Manifest Review

§262.12 EPA Identification Numbers

(a) A generator without an EPA identification number must not treat, store, dispose of, or offer for transportation hazardous waste.

(c) A generator must not offer his hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

§262.20 General Requirements

(a) A manifest must be prepared before a generator transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal.

(b) A generator must designate on the manifest one facility that is permitted to handle the waste described on the manifest.

(c) A generator may designate one alternate facility in the event that an emergency prevents delivery to the primary designated facility.

(e) An exception to manifest requirements applies to generators of greater than 100 kg but less than 1000 kg in a month where:

(1) The waste is reclaimed under contractual agreement under which:

(i) The type of waste and frequency of shipments are specified;

(ii) The vehicle used to transport the waste and deliver the regenerated material back to the generator is owned by the reclaimer; and

(2) The generator maintains a copy of the agreement for at least three years after the termination of the agreement.

§262.21 Acquisition of Manifests

(a) If the consignment State supplies manifest forms and requires its use, the generator must use that manifest.

(b) If the consignment State does not supply the manifest, but the generator State does, the generator must use the generator State's manifest.

(c) If neither generator State nor consignment State supplies the manifest, then the generator may use a manifest from any source.

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Inspection Procedures - Sections 262.12 through 262.23 and Section 262.40

Key Considerations:

- Has each original in the generator's file of manifests been signed and dated by the generator and the first transporter? Is the EPA identification number clearly marked for the generator, the transporter and the designated facility?

- Have all appropriate spaces been filled out correctly, and all changes and cross-outs on the manifest been properly initialed?

- Have the generator's manifest files been carefully reviewed to ensure that all shipments have been accepted at a designated facility? After 35 days from when the waste was accepted by the initial transporter (see Section 262.42), the designated facility should return the copy of the manifest with the signature of the designated facility's owner/operator. The generator must keep this copy on file for three years and may discard the original. The return receipts for waste shipments must be kept on file for three years.

- **The inspector should be aware that all State manifests do not look alike and that some State waste codes are different from EPA waste codes. Also, federal regulations do not require that the federal waste codes be used, though State regulations might.**

- **If waste is transported periodically, e.g., during the first week of each month, check to see if originals or return receipts are on file for each anticipated shipment date.**

- **Obtain explanations for unusual gaps in the frequency of off-site shipment. Are subsequent shipments larger? Has the 90-day storage limit (see §262.34) been exceeded for facilities without storage permits?**

Although the generator must determine if a waste is hazardous, the inspector should use his knowledge of the processes conducted at a facility in order to verify that the determination of hazardous wastes is appropriate and that any hazardous waste shipped offsite is manifested. The inspector may need to sample the waste or to review all the appropriate information back in the office in order to properly evaluate the generator's determination. In addition, inspectors should list the facilities that appear on the manifests. Subsequent office review will reveal whether such facilities offer LDR treatment technologies capable of meeting the applicable treatment standards. The generator, however, is not required to analyze the waste in order to make a hazardous waste determination.

☞ Generators also have LDR recordkeeping requirements for most manifests. (See discussion under 40 CFR 268.7.)

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General Requirements and Manifest Review (continued)

§262.22 Number of Copies

The manifest consists of sufficient copies to provide the generator, each transporter, and the designated facility with one copy plus one additional copy to be returned to the generator.

§262.23 Use of the Manifest

(a) The generator must:

(1) Sign the manifest; and
(2) Obtain signature and date of acceptance from initial transporter; and
(3) Retain one copy for three years or until the designated facility returns the signed copy, which must be retained for three years.

(b) The generator must give the transporter the remaining copies of the manifest.

(c) For bulk shipments within the U.S. solely by water, the generator must send three signed and dated copies of the manifest to the designated facility or to the last water transporter to handle the waste if exported by water. Copies of the manifest are not required for each transporter.

(d) For rail shipments within the U.S. which originate at the site of generation, the generator must send three signed and dated copies to:
(i) the next non-rail transporter; or
(ii) the designated facility if transported solely by rail; or
(iii) the last rail transporter to handle waste in the U.S. if exported.

(e) For shipments to a designated facility in an authorized State which has not obtained authorization to regulate that particular waste, the generator must assure that the signed manifest is returned to the generator, and any out-of-State transporter signs and forwards the manifest to the designated facility.

§262.40 Recordkeeping

A generator must keep a signed manifest until the signed copy is returned from the designated facility. All return-receipt copies, Biennial Reports, Exception Reports, and records with test results and waste analyses must be kept for three years. This time period is automatically extended during the course of any unresolved enforcement action.

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INSERT PAPER TRAIL GRAPHIC

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Correlation with Applicable DOT Regulations

§262.30 Packaging

Hazardous waste packaging must meet DOT standards specified in 49 CFR 173 (General requirements for shipments and packaging), 178 (Shipping container specifications), and 179 (Specifications for tank cars).

§262.31 Labeling; §262.32 Marking

Before any off-site transportation, containers of hazardous waste must be marked and labeled according to 40 CFR 172 (see Hazardous Waste Tables). The following words must be printed on each container of less than 110 gallons, in durable lettering or on a label or tag:

> HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.
>
> Generator's Name and Address _____.
> Manifest Document Number _____.

§262.33 Placarding

Placards must be provided in accordance with DOT regulations for hazardous materials under 49 CFR 172, Subpart F - Placarding.

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Inspection Procedures - Sections 262.30 through 262.33

Key Considerations:

- **Are any containers damaged, corroded or leaking?**
- **Does each container have an appropriate DOT label, the manifest number and the generator's name and address?**
- **Is an appropriate placard placed on each motor vehicle, freight container or rail car? (Note that there are exceptions to this requirement for certain classes such as ORM-A, B, C, D, or E material).**
- **DOT regulations, 49 CFR Parts 178 and 179, concern shipping containers and tank car specifications for the design of the container or the tank care and are beyond the scope of most RCRA inspections. The DOT requirements, Parts 172 and 173 for shipping and packaging, organize materials according to their hazard classification and specifically describe the packaging requirements for each chemical or classification of chemicals. Since hazardous wastes can be gases as well as liquids or solids, and can be shipped in bulk as well as in small quantities by container, familiarity with the generated waste characteristics and the DOT hazard classification of the waste prior to the inspection will be helpful to the inspector. A review of the specific DOT container requirements should be part of the inspection file review if there is concern that the generator may not be meeting DOT requirements.**

DOT's Hazardous Waste Tables identify the labeling requirements for hazardous substances. The label category, ORM-E, applies to most hazardous waste mixtures that do not meet the definition of a hazardous substance for labeling purposes. DOT requirements change frequently, and the inspector should try to obtain the current requirements from Regional DOT experts. State regulations are often more stringent and the inspector should be aware of those circumstances.

Ideally the inspector should verify that each container transported is labeled and marked properly. However, the inspector usually will not be present when a shipment is ready. Compliance with these requirements can be ascertained by questioning the facility representative. In cases where placards are required, the generator can be requested to produce them. The presence of printed hazardous waste labels usually means that the generator places them on the containers prior to shipment offsite.

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Accumulation Time; Basic Requirements

§262.34 Accumulation Time

(a) A generator may accumulate hazardous waste onsite without a permit for 90 days or less, provided that:

(1)(i,ii) The waste is placed in containers and the generator complies with Part 265 Subpart I, or the waste is placed in tanks and the generator complies with Subpart J (except for §265.197(c) and §265.200).

(1)(iii) The waste is placed on drip pads and the generator complies with Part 265, Subpart W and provides documentation of procedures to remove waste at least once every 90 days.

(2) The date upon which accumulation begins is marked upon each container

(3) Each container and tank is labeled "hazardous waste"

(4) The operator complies with Part 265, Subparts C and D, Preparedness and Prevention, and Contingency Plan and Emergency Procedures, and with §265.16 (Personnel Training)

(b) A generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and must obtain interim status and apply for a permit unless he has been granted an extension by the Regional Administrator.

(c)(1) A generator may accumulate up to 55 gallons of hazardous waste or one quart of acutely hazardous waste in containers at a place near the point of generation and is not required to obtain a permit or interim status if he:

(i) Complies with §265.171 (condition of containers), §265.172 (compatibility), and §265.173(a) (management of containers)

(ii) Marks the containers with the words "hazardous waste" or similar description.

(2) If he exceeds either 55 gallons of hazardous waste or one quart of acutely hazardous waste, the generator has 3 days to comply with paragraph (a) above with respect to the amount of excess waste.

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Inspection Procedures - Section 262.34 (a)(b)(c)

Key Considerations:

- **Is each container and tank marked as "hazardous waste"?**
- **Do containers have the starting date for the accumulation period marked on the container? The date should not be more than 90 days prior to the date of the inspection unless the generator meets the conditions of §262.34(c) or has an extension.**
- **Can the generator show through records and manifests that the tank has been emptied within 90 days? Tanks are not required to have the starting date marked on them because they are reused. This should be verified for several previous waste shipments.**
- **Have satellite accumulation areas been inspected to insure that each area has not exceeded a volume of 55 gallons of all hazardous waste or one quart of acutely hazardous waste? Note: a facility can have multiple satellite accumulation areas.**
- **Are there any satellite accumulation areas not identified by the generator which are visible during the walkthrough inspection?**
- **Are satellite accumulation areas at or near the point of generation and under the control of a close-by operator?**

Additional requirements with which a generator must comply are applicable sections of Part 265, set forth in Table III-4. Please refer to these sections as appropriate.

Both large and small quantity generators can treat in tanks or containers, provided compliance with all §262.34 requirements has been achieved. For example, an ignitable solvent cannot be rendered by allowing the material to volatilize into the atmosphere, because §262.34(a) references a Part 265 Subpart I requirement that containers must be closed, except when necessary to add or remove waste. Additionally, for purposes of compliance with LDR requirements, generators who treat to meet LDR standards must develop a waste analysis plan.

☞ Also see discussion under §268.7 (waste analysis plan).

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Accumulation Time; Small Quantity Generators

§262.34 Accumulation Time (continued)

(d) A SQG who accumulates greater than 100 kg but less than 1000 kg of waste in a calendar month may accumulate waste onsite for 180 days without a permit or interim status provided that:

(1) Waste quantity never exceeds 6000 kilograms onsite

(2)(3) The generator complies with Subpart I of Part 265 (except §265.176) or §265.201 in Subpart J of Part 265

(4) The generator complies with paragraphs (a)(2) and (a)(3) and the requirements of Subpart C of Part 265 and 268.7(a)(4); and

(5) The generator complies with the following:

(i) There is at least one employee on the premises or on call as emergency coordinator;

(ii) The following information is posted next to the telephone:

(A) Name and telephone number of emergency coordinator;
(B) Location of fire extinguishers, spill control material, and fire alarm; and
(C) Telephone number of fire department unless facility has direct alarm.

(iii) Generator must ensure that all appropriate employees are familiar with waste handling and emergency procedures; and

(iv) Emergency coordinator must respond appropriately in the event of a fire, spill or release to the environment. Any releases which could threaten human health off-site or to surface water must be reported to the National Response Center.

(e) A SQG may accumulate waste onsite for 270 days without a permit or interim status if the waste must be transported over 200 miles for off-site storage, disposal, or treatment.

(f) A SQG who accumulates waste onsite over the allowable number of days or over 6000 kg must obtain interim status and apply for a permit or apply for an extension from the Regional Administrator.

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Inspection Procedures - Section 262.34 (d)(e)(f)

Key Considerations:

- **Have you confirmed that generators who claim to be SQGs are not generating more than the limit for SQGs? (Note: 100-1000 kg/mo is between 220 and 2200 pounds or about 25 to under 300 gallons.) This may be done by looking at the manifests for quantities and doing a mass balance to convert to probable weight (see below).**

- **Has the generator exceeded the 180-day time period without having to ship the waste over 200 miles? The manifests should provide the location of the designated facility. If the generator has to ship the waste over 200 miles, then the waste may be stored for 270 days.**

The inspector should calculate the maximum quantity of hazardous waste in containers based upon storage volumes of tanks. Based upon the waste characteristics, the density of the waste (water weighs 8.34 lbs. or 3.79 kg/gal.) and the volume available for waste storage, calculate the total quantity of waste observed. This quantity must not exceed 6000 kg unless the facility has interim status, a permit, or an emergency extension. In the case of tanks, where the maximum volume will exceed the 6000 kg limit but the actual waste quantity is less, note this circumstance. Even though it is not a current violation, it is a good idea to mention the potential to the generator.

When inspecting generators that produce small quantity wastes, verify that the SQG meets the requirements for posting the appropriate phone numbers and providing employee training. During the visual inspection, check for evidence of spills or other releases or the potential for releases.

SQGs can also establish satellite accumulation areas under §262.34(c).

Steps SQGs may take to prepare for facility emergencies:

- **Installing and maintaining in-plant emergency equipment, such as an alarm, a telephone or a two-way portable radio, fire extinguishers (using water, foam, inert gas, or dry chemicals, as appropriate to waste type), hoses, automatic sprinklers, or spray equipment, so that it is immediately available to employees if there is an emergency.**

- **Providing enough room for emergency equipment and response teams to get into any area in the facility in the event of an emergency.**

- **Writing to local fire, police, and hospital officials or State or local emergency response teams explaining the types of wastes handled and requesting cooperation and assistance in handling emergency situations.**

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Recordkeeping and Reporting

§262.41 Biennial Report

A generator, except SQG, who ships any hazardous waste off-site to a TSDF in the U.S. must submit a Biennial Report to the Regional Administrator by March 1 of even-numbered years. Biennial Reports (EPA Form 8700-13A) must cover generator activities during the previous year and must include:

(1) EPA ID number, name, and address of the generator

(2) The calendar year covered by the report

(3) The EPA ID number, name, and address for each off-site facility to which waste was shipped

(4) The EPA ID number and name for each transporter used

(5) A description, EPA hazardous waste number, DOT hazard class, and quantity of each hazardous waste shipped offsite to a facility in the United States—information must be listed by EPA ID number of each facility to which waste was shipped

(6) A description of the efforts undertaken during the year to reduce volume and toxicity of waste generated

(7) A description of the changes in volume and toxicity of waste actually achieved during the year compared to previous years

(8) The certification signed by the generator or authorized representative

(b) A generator who manages waste onsite must submit a Biennial Report covering those wastes in accordance with Parts 270, 264, 256, and 266. Reporting for exports is not required by §262.41 as part of the Biennial Report. Primary exporters are required to file a separate report pursuant to §262.56.

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Inspection Procedures - Section 262.41

Key Considerations:

- **Is the generator's Biennial Report available? Although the generator is not required to have it onsite, if it is available, review the contents for completeness. If the reports are not available onsite, the inspector can review them in the State or Regional office.**

- **Review waste minimization practices and compare recycling practices with the nature of the waste to verify that these practices are consistent for the wastes generated.**

Approaches to Waste Reduction

- **Source separation (or segregation) keeps hazardous waste from contaminating nonhazardous waste through management practices that prevent the wastes from coming into contact. This is the cheapest and easiest method of reducing the volume of hazardous waste to be disposed of, and is widely used by industry. In addition to reducing disposal costs, source separation reduces handling and transportation costs.**

- **Recycling (also referred to as recovery and reuse) is also widely used by industry. Recycling is the process of removing a substance from a waste and returning it to productive use. Generators commonly recycle solvents, acids, and metals.**

- **Substitution of raw materials may offer the greatest opportunity for waste reduction. By replacing a raw material that generates a large amount of hazardous waste with one that generates little or no hazardous waste, manufacturers can substantially reduce the waste volume.**

- **Manufacturing process changes consist of either eliminating a process that produces a hazardous waste or altering the process so that it no longer produces the waste.**

- **Substitution of products also may eliminate use of hazardous material. For example, by substituting concrete posts for creosote-preserved wood posts in construction operations, builders can remove any possibility that the hazardous creosote will leach from the posts and contaminate underlying ground water or surrounding soil.**

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Exception and Additional Reporting

§262.42 Exception Reporting

(a)(1) An LQG generator who does not receive the return copy of the manifest with the handwritten signature of the owner/operator of the designated facility within 35 days of the date the waste was initially accepted by the first transporter, must determine the status of the waste.

(a)(2) An LQG generator must submit an Exception Report to the Regional Administrator if he has not received the signed return-copy of the manifest within 45 days. An Exception Report must include:

(1) A legible copy of the original manifest ; and
(2) A letter signed by the generator or authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

(b) A SQG who does not receive the return copy of the manifest with the handwritten signature of the owner/operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter, must submit a copy of the manifest, with indication that the generator has not received confirmation of delivery, to the Regional Administrator.

§262.43 Additional Reporting

The Administrator may require generators to furnish additional reports concerning the quantities and disposition of hazardous wastes.

§262.44 Generators of 100-1000 kg/Month

Such generators are exempted from recordkeeping and reporting requirements of Subpart D, except for §§ 262.40(a), (c), and (d) (recordkeeping), 262.42(b) (exception reporting), and 262.43 (additional reporting).

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Inspection Procedures - Sections 262.42 through 262.44

Key Considerations:

- **Are any additional reports required by the Regional Administrator? Verify these reports if applicable.**

- **Many States require that a signed manifest be returned to the generator prior to 35 days after shipment.**

During the review of the generator's manifest file, if the inspector finds records of waste shipments (original manifests) that do not have a signed return copy of the manifest on file within 35 days of the date of the off-site shipment, he should find documentation that the generator has made efforts to locate the waste and has filed the Exception Report within 45 days of shipment. Even SQGs must file a shortened version of an Exception Report with the Regional Administrator within 60 days of the date the waste was accepted by the initial transporter. This report need only be a handwritten or typed note attached to a copy of the manifest stating that the return copy was not received by the SQG.

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Exporter of Hazardous Waste: Requirements

§262.52 General Requirements

In order to export hazardous waste, an exporter must comply with applicable requirements of Subpart E and Part 263. Exports of hazardous waste are prohibited unless:

(a) §262.53 notification to EPA has been provided;

(b) The receiving country has consented to receive hazardous waste;

(c) A copy of the EPA Acknowledgment of Consent accompanies the manifest; and

(d) The shipment conforms to the conditions of the receiving country's written consent.

§262.53 Notification of Intent to Export

A primary exporter of hazardous waste must notify EPA of the intent to export this waste at least 60 days before the initial shipment. The notification may cover a period of 12 months or less. The notification must include:

(a) (1) Name, mailing address, telephone number, and EPA ID of exporter;

(2) (i) A description of the hazardous waste and EPA ID number, DOT shipping name, hazard class, and UN/NA number;
(2) (ii) Estimated frequency of export and time period;
(2) (iii) Estimated quantity;
(2) (iv) All points of entry and departure from each country through which the waste must pass;
(2) (v) Description of the mode of transportation and type of container;
(2) (vi) Description of the manner of waste management in the receiving country;
(2) (vii) Name and site address of consignee; and
(2) (viii) Name of transit country and length of time remaining there.

(b) Notification shall be sent to the Office of Waste Programs Enforcement.

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Inspection Procedures - Sections 262.52 through 262.53

With respect to these Sections, the central objective of an inspection is to identify all potentially hazardous waste material that is being exported. The inspector should ask if any recycled material is being exported and whether any evaluation has been made to determine if the material is hazardous under Part 261.

The inspector should verify that the exporter has filed the Notification of Intent to Export within the required 60-day period before the initial shipment commences and that the notification is complete. A notification is necessary for any exported wastes that are hazardous. The inspector should also verify that the EPA Acknowledgment of Consent accompanies the manifest.

Remember:

- **Bilateral international agreements have been signed with Canada and Mexico that impose additional requirements that are analogous to a permit or license system.**

- **The hazardous waste export program is a U.S. EPA program that will not be delegated to the States.**

- **All exporters of materials (including hazardous waste) with a value exceeding $1,500 are required to prepare a Shipper's Export Declaration (SED) indicating the number and type of containers, the type of material (as indicated by classification codes established by the Census Bureau), the units and weight of the shipments, and the value. Most exports of hazardous waste for disposal will not require an SED. Conversely, exports of listed hazardous waste to be recycled will frequently exceed $1,500 in value and will require an SED. The SED may be an important ancillary source for information on cases involving suspected sham recycling.**

- **Failure to file an SED or falsifying information on an SED are enforceable violations under Census Bureau regulations. The inspector should verify that the primary exporter has filed an SED for recycled materials. If no SED has been filed, further investigation into recycling activities should be conducted.**

- **Below is a sample Acknowledgement of Consent that EPA will issue to an exporter and that must accompany an export shipment:**

May 19, 1992

This document will serve as the EPA Acknowledgement of Consent for SCHUYLKILL METALS CORPORATION, BATON ROUGE, LOUISIANA to export 250 TONS OF NICKEL/CADMIUM BATTERIES (EPA HAZARDOUS WASTE NUMBER D0006) to S.N.A.M., CEDEX, FRANCE. This consent is VALID for the period of APRIL 28, 1992 TO APRIL 27, 1993. Please be advised that a copy of this Consent must accompany each shipment of hazardous waste and that a copy of the manifest must be left with the U.S. Customs Service, when the material leaves the jurisdiction of the United States.

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Exporter of Hazardous Waste: Requirements (continued)

§262.54 Special Manifest Requirements

(a,b) The primary exporter must enter the name and site address of the consignee and alternate consignee in place of information on the designated facility and alternate facility.

(c) Primary exporter must identify the point of departure from the U.S.

(d) The following must be added to Item 16 of the Manifest: "and conforms to the terms of the attached EPA Acknowledgment of Consent."

(e) The primary exporter must obtain the manifest form from the primary exporter's State if the State supplies the manifest form and requires its use; if the primary exporter's State does not require its use, the manifest may then be obtained from any source.

(f) The primary exporter must require the consignee to confirm in writing the delivery of the hazardous waste to that facility and to describe any significant discrepancies between the manifest and the shipment.

(g) If a shipment cannot be delivered to the designated or alternate consignee, the primary exporter must:

(1) Renotify EPA to allow shipment to a new consignee and obtain an EPA Acknowledgment of Consent prior to delivery; or

(2,3) Instruct the transporter to return the waste to the primary exporter or designate another facility within the United States; and revise the manifest in accordance with the primary exporter's instructions.

(h) The primary exporter must attach a copy of the EPA Acknowledgment of Consent to the manifest that must accompany the hazardous waste shipment (similar rules apply for exports by rail or water).

(i) The primary exporter must provide the transporter with an additional copy of the manifest for delivery to the U.S. Customs official at the point the hazardous waste leaves the United States.

§262.55 Exception Reports

A primary exporter must file an Exception Report with the Administrator if:

(a) He has not received a copy of the manifest signed by the transporter stating the date and place of departure from the U.S. within 45 days of the date the waste was accepted by the initial transporter;

(b) The primary exporter has not received written confirmation from the consignee that the hazardous waste was received within 90 days of the date the waste was accepted by the initial transporter; or

(c) The waste was returned to the U.S.

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Inspection Procedures - Sections 262.54 through 262.55

Key Considerations:

- **Has the exporter's file been reviewed? The correct information should be included on all required reports and manifests. Some points that may be overlooked but are required are (1) the point of departure from the U.S. and (2) the additional certification statement included on Item 16 of the manifest.**

- **Has the transporter returned a signed copy of the manifest with the date and place of departure within 45 days. If not, has the exporter filed an Exception Report for each export of waste for which a manifest copy was not received?**

- **Has the primary exporter provided an extra copy of the manifest to the transporter for delivery to the U.S. Customs official at the point of departure from the U.S.?**

- **Does the generator produce spent solvents, wastes containing heavy metals, or materials contaminated with solvents or metals? Since these materials represent a large percentage of exported wastes, the inspector should pay careful attention to how they are being disposed.**

- **Are wastes generated onsite and recycled offsite? If so, verify the location of the ultimate recycling facility.**

- **Is the generator in Regions I, II, III, or V? If so, exports should be carefully checked, as more than 90% of waste exports originate in these Regions.**

Before export, the exporter must have EPA Acknowledgement of Consent, and a copy must accompany each shipment with the manifest. If the exporter is using a broker, the inspector should question the nature of the arrangements made in order to verify that the export requirements will be met.

Within 90 days from the date when the waste was accepted by the initial transporter, the consignee must confirm in writing the delivery of the waste. The signed copy of the manifest may be used as the confirmation, but other documents are acceptable. Compliance with the 90-day time period should be verified by observing the date on the manifests. If 90 days have expired from the date of shipment, the exporter should have written confirmation from the consignee. If the shipment is not delivered as intended, the exporter must start exception reporting procedures by renotifying EPA and obtaining a revised EPA Acknowledgment of Consent. The inspector should verify that the exporter has obtained the revised Acknowledgment of Consent, which must be kept on file for three years.

The ultimate TSDF in a receiving country is defined as the consignee and is not required to have a U.S. EPA ID number. However, the primary exporter must enter the name and site address of the consignee on the manifest.

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Exporter of Hazardous Waste: Annual Reports

§262.56 Annual Reports

(a) By March 1 of each year, primary exporters of hazardous waste must file with the Administrator a report summarizing hazardous waste export activity during the previous calendar year. Such reports shall include the following:

(1) The EPA ID number and the name, mailing address, and site address of the exporter;

(2) The calendar year covered by the report;

(3) The name and site address of each consignee;

(4) By consignee, for each hazardous waste exported, a description of the hazardous waste, the EPA hazardous waste number, the DOT hazard class, the name and EPA ID number for each transporter used, the total amount of waste shipped, and the number of shipments, pursuant to each notification;

(5) Except for exports of 100 kg but less than 1000 kg of wastes per month, the following must be included (in even numbered years):

(i) A description of the efforts undertaken during the year to reduce the volume and toxicity of the waste generated; and

(ii) A description of the changes in volume and toxicity of waste achieved during the reporting year compared with previous years.

(6) A certification signed by the primary exporter.

§262.57 Recordkeeping

The exporter must keep a copy of each notification of intent to export, EPA Acknowledgment of Consent, confirmation of delivery, and annual report for at least three years.

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Inspection Procedures - Sections 262.56 through 262.57

Key Considerations:

- **Has the exporter filed an Annual Report? Does that report include the required items as listed in 262.56(a) 1-6 provided above?**

Remember: **exporters other than small quantity exporters must file reports describing waste minimization effects in even-numbered years only.**

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Manifest Review

§262.60 Imports of Hazardous Waste

(a,b,c) Importers of hazardous waste must meet the manifest requirements of 262.20 except that the foreign generator's name and address and the importer's name, address, and EPA ID number must be included in place of the generator's information and the importer or his agent must sign and date the certification and must obtain the initial transporter's signature on the manifest.

§262.70 Farmers

A farmer disposing of waste pesticides from his own use is not required to comply with the hazardous waste management standards provided he triple rinses each emptied pesticide container and disposes of the residues on his own farm in a manner consistent with the instructions on the label.

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Inspection Procedures - Sections 262.60 through 262.70

Key Considerations:

- **Are the required information and signatures provided on the manifests?**

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TABLE III-3 TRANSPORTER REGULATORY REQUIREMENTS

Transporters: General Requirements

§263.11 EPA Identification Number

(a) A transporter must not transport hazardous wastes without an EPA ID.

§263.12 Transfer Facility Requirements

(a) A transporter who stores manifested shipments of hazardous waste at a transfer facility in containers meeting requirements of §262.30, for a period of 10 days or less, is not subject to regulation under Parts 270, 264, 265, and 268.

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Inspection Procedures - Sections 263.11 and 263.12

Key Considerations:

- **Has the transporter obtained an EPA identification number? Is the transporter using the correct number? Verify by checking manifests or copies of manifests in the transporter's possession.**

- **How long has any waste shipment been stored at a transfer facility by the transporter?**

If waste is stored for more than 10 days, the transporter must comply with the requirements for storage, treatment, and disposal facilities. The inspector can check the dates on the manifest in order to determine the date when the waste was accepted by the transporter. After accounting for a reasonable travel time to reach the transfer station, the inspector can determine if the waste has been held at the transfer station for more than 10 days.

- **Transporters who bring hazardous waste into the United States must comply with the RCRA generator standards.**

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Transporters: Manifest System

§263.20 The Manifest System

(a) A transporter may not accept hazardous waste from a generator unless the waste is accompanied by a manifest signed by the generator.

(b) Before transporting the hazardous waste, the transporter must sign and date the manifest, acknowledging acceptance of the hazardous waste from the generator. The transporter must return a signed copy to the generator before leaving the generator's property.

(c) The transporter must ensure that the manifest accompanies the hazardous waste.

(d) A transporter who delivers hazardous waste to another transporter or to the designated facility must:

(1) Obtain the date of delivery and the signature of that transporter, or of the owner/operator of the designated facility, on the manifest;

(2) Retain one copy of the manifest; and

(3) Give the remaining copies of the manifest to the accepting transporter or designated facility.

§263.21 Compliance with the Manifest System

(a) The transporter must deliver the entire quantity of hazardous waste which has been accepted from the generator to:

(1) The designated facility listed on the manifest; or

(2) The alternate designated facility if waste cannot be delivered to the designated facility; or

(3) The next designated transporter; or

(4) The place outside the U.S. designated by the generator.

(b) If hazardous waste cannot be delivered in accordance with section (a), the transporter must contact the generator for further directions and revise the manifest accordingly.

§263.22(a) Recordkeeping

(a) A transporter of hazardous waste must keep a signed copy of the manifest for a period of three years from the date the hazardous waste was accepted by the initial transporter.

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Inspection Procedures - Section 263.20 and 263.22(a)

Key Considerations:

- Does an appropriately signed manifest accompany each shipment of waste? (see exceptions for bulk shipments)

When transporting drums by truck, transporters will often combine shipments from several generators located along an established route, and each shipment must have its own manifest. However, most inspectors will have limited access to shipments in route and must usually focus on a review of manifest files in order to verify that each shipment has a correctly filed and signed manifest.

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Transporters: Bulk Shipments by Water

§263.20(e) Bulk Shipment by Water

(e)(1) In order to be exempt from the requirements of §263.20(c), (d), and (f), the transport of hazardous waste delivered by water (bulk shipment) to the designated facility must comply with the following procedures:

(2) A shipping paper containing all the information required on the manifest (excluding the EPA ID numbers, generator certification, and signatures) must accompany the hazardous waste;

(3) The delivering transporter must obtain the date of delivery and signature of the owner/operator of the designated facility on either the manifest or the shipping paper;

(4) The person delivering the hazardous waste to the initial water (bulk shipment) transporter must obtain the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forward it to the designated facility; and

(5) A copy of the shipping paper or manifest must be retained by each water (bulk shipment) transporter.

§263.22(b) Recordkeeping

(b) For shipments delivered to the designated facility by water (bulk shipments), each water (bulk shipment) transporter must retain a copy of a shipping paper containing all of the information required by §263.20(e)(2) for a period of three years from the date the waste was accepted by the initial transporter.

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Inspection Procedures - Sections 263.20(e) and 263.22(b)

Key Considerations:

- Are shipping papers used in lieu of manifests? Remember: bulk transporters by water can use shipping papers in lieu of manifests.
- When shipping papers are used, do they contain the name, address, and phone number of the generator; and the name of the transporter(s) and the name of the designated facility?
- Has the transporter retained a signed copy of the shipping paper or manifest for each shipment for three years?

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Transporters: Bulk Shipment by Rail

§263.20(f) Bulk Shipment by Rail

(f)(1) When accepting hazardous waste from a non-rail transporter, the initial rail transporter must:

(ii) Return a signed and dated copy of the manifest to the non-rail transporter;

(iii) Forward at least three copies of the manifest to:

(A) The next non-rail transporter, if any; or

(B) The designated facility, if the shipment is delivered to that facility by rail; or

(C) The last rail transporter designated to handle the waste in the United States; and

(iv) Retain one copy of the manifest and rail shipping paper.

(2) Rail transporters must ensure that a shipping paper containing all of the information required on the manifest (excluding the EPA ID numbers, generator certification, and signatures) accompanies the hazardous waste at all times.

(3) When delivering hazardous waste to the designated facility, a rail transporter must:

(i) Obtain the date of delivery and the signature of the owner/operator of the designated facility on the manifest or the shipping paper (if the manifest has not been received by the facility); and

(ii) Retain a copy of the manifest or signed shipping paper.

(4) When delivering hazardous waste to a nonrail transporter, a rail transporter must:

(i) Obtain the date of delivery and the signature of the next nonrail transporter on the manifest; and

(ii) Retain a copy of the manifest.

(5) Before accepting hazardous waste from a rail transporter, a nonrail transporter must sign and date the manifest and provide a copy to the rail transporter.

§263.22(c) Recordkeeping

(c) For shipments of hazardous waste by rail within the United States:

(1) The initial rail transporter must keep a copy of the manifest and shipping paper with all of the information for three years from the date of the waste accepted for transport.

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Inspection Procedures - Sections 263.20(f) and 263.22(c)

Key Considerations:

- Are shipping papers, rather than manifests, accompanying each shipment? Note: bulk transporters by rail may forward the manifest and use shipping papers instead to accompany each shipment.

- When shipping papers are used, do they contain the name, address, and phone number of the generator, and the name of the transporter(s) and the name and address of the designated facility? Note: intermediate rail transporters are not required to sign either the manifest or shipping papers.

- Has the rail transporter retained a signed copy of the shipping papers or manifest for each shipment for three years from the date the waste was accepted for transportation by the initial transporter?

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Transporters: Bulk Shipment by Rail (continued)

§263.20(g) Export of Hazardous Waste

(g) A transporter who transports hazardous waste out of the United States must:

(1) Indicate on the manifest the date the hazardous waste left the United States;

(2) Sign the manifest and retain one copy;

(3) Return a signed copy of the manifest to the generator; and

(4) Give a copy of the manifest to a U.S. Customs Official.

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Inspection Procedures - Section 263.20(g)

Key Considerations:

- Do all manifests on file with a transporter who ships outside the U.S. include the date the waste left the U.S., as well as all general information?
- Has the transporter retained a signed copy of a manifest for each shipment for three years?

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TABLE III-4 INTERIM STATUS FACILITY REGULATORY REQUIREMENTS

General Facility Standards

§265.1 Purpose, Scope, and Applicability

(c) The requirements of this part do not apply to:

(1) Ocean disposal subject to MPRSA permit

(2) [Reserved]

(3) Owner/operator of a POTW

(4) Storage, treatment or disposal of hazardous waste in a State authorized under RCRA Part 271 (Note: State requirements apply instead.)

(5) State permitted, licensed, or registered municipal or industrial solid waste facilities that only manage excluded hazardous waste

(6) Facilities managing recyclable materials, except as subparts C, D, F, or G of Part 266 require otherwise

(7) A generator accumulating waste on site in compliance with §262.34

(8) A farmer disposing of waste pesticides from his own use in compliance with §262.70

(9) Totally enclosed treatment facilities, as defined in §260.10

(10) An elementary neutralization unit or wastewater treatment unit, as defined in §260.10

(11) Treatment or containment during immediate response activities following a release of hazardous waste or material that becomes a waste when discharged

(12) Transporters holding waste at transfer facilities for less than 10 days

(13) Adding of absorbent materials to a waste in a container.

§265.11 Identification (ID) Number

Every facility owner/operator must have an EPA identification number.

§265.12 Required Notice

(a) The owner/operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the Regional Administrator in writing at least four weeks in advance of the date that the waste is expected to arrive at the facility.

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TABLE III-4 INTERIM STATUS FACILITY REGULATORY REQUIREMENTS

(b) Before transferring ownership or operational control the owner/operator must notify the new o/o in writing of these requirements.

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Inspection Procedures - Sections 265.1, 265.11, and 265.12

Key Considerations:

- Does the TSDF have an identification number, and is the number being used appropriately on manifests, required reports, notifications, and other necessary documents?
- Are all exemptions or excluded units appropriately excluded? Review processes at the facility in order to confirm that any exemptions or exclusions are appropriately made.
- Are copies of all notices retained in a facility's operating record?

During an inspection, the inspector should ask the owner/operator if they accept shipments of foreign wastes or other recycled materials, and whether these wastes have been evaluated to see if they meet the criteria in Part 261. The inspector should identify all foreign generated wastes received at the site and verify that the waste corresponds with the notices that have been filed. Receiving any foreign hazardous waste without filing appropriate notice constitutes a violation.

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General Waste Analysis

§265.13 General Waste Analysis

(a)(1) Before an owner/operator manages any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste.

(b) The owner/operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a). The plan must specify:

(1) The parameters for which each hazardous waste or non-hazardous waste will be analyzed;

(2) The test methods which will be used to test for these parameters;

(3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed;

(4) The frequency with which the initial analysis of the waste will be repeated;

(5) For off-site facilities, the waste analysis that hazardous waste generators have agreed to supply;

(6) The methods which will be used to meet the additional waste analysis requirements for specific waste management units and LDR; and

(7) The schedule for sampling, analyzing, and annual removal of residues (see §260.22) for surface impoundments exempt from LDR under §268.4 procedures.

(c) For off-site facilities, the waste analysis plan required in paragraph (b) of this section must also specify the procedures which will be used to inspect and analyze each movement of hazardous waste received at the facility.

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Inspection Procedures - Section 265.13

Remember:

- Review the facility's written waste analysis plan before checking the file of waste analyses.
- Make sure that the methods described in Part 261 and SW 846 are acceptable for sampling and analysis.
- The waste analysis plan must be adequate for determining whether a waste is subject to the land disposal restrictions. The initial identification and classification of wastes by the generator will determine whether the wastes are subject to the LDR program, whether they are eligible for variances, and the treatment standards which must be complied with.
- Generators storing waste onsite for more than 90 days must have a waste analysis plan.
- Be on the lookout for waste or waste streams that have not been tested, or have been tested at incorrect points of compliance.

If more than one waste analysis plan exists or existed, determine the applicability of each plan with respect to the time frame of the inspection and which plan is currently in effect. The plans for offsite facilities may define different waste analysis criteria for the types of waste it is currently accepting. It is a good idea to prepare lists of the various wastes handled at the facility prior to examination of the records.

Offsite facilities must have procedures to verify that the waste matches the identity of the waste on the manifest by inspecting each waste movement and performing analysis when the actual wastes are suspected to be different from the waste identified on the manifest. It is the inspector's responsibility to determine if the facility's plan is adequate and adhered to. This includes reviewing the waste analysis procedures to see if they can identify all of the characteristics of the anticipated waste types. When pre-acceptance determinations are made through actual testing, inspection of the laboratory facility may be called for.

If a waste analysis plan is adequate, the inspector should verify that the waste analysis is performed for each waste stored over 90 days in the manner required and specified in the plan. Records of the analyses must be kept on file as part of the operating record.

At facilities where wastes are generated and disposed of onsite, and where records or analyses necessary for offsite disposal are not required, the inspector should be especially careful to check for waste or waste streams that have not been tested. If an owner/operator maintains that a particular waste has not been tested because it is not hazardous, he must provide justification, such as Material Safety Date Sheet forms or process information providing waste content, to support this determination.

A facility can use data supplied by generators to satisfy the analysis requirements in §265.13(a). Treatment and disposal facilities may generally rely on information provided to them by generators or treaters of the waste. However, treatment and disposal facilities must conduct periodic detailed physical and chemical analysis on their waste streams, pursuant to §268.7(b) and (c), to ensure that appropriate Part 268 treatment standards are being met.

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Security

§265.14 Security

(a) The owner/operator must prevent unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility unless contact with waste, structures, or equipment will not injure persons or livestock.

(b) Unless exempt, a facility must have:

(1) A 24 hour surveillance system; or

(2)(i) An artificial or natural barrier which completely surrounds the active portion of the facility; and

(ii) A means to control entry, at all times, through gates or other entrances to the active portion of the facility.

(c) Unless exempt, a sign with the legend, "Danger--Unauthorized Personnel Keep Out," must be posted at each entrance to the active portion of a facility, and at other locations, in sufficient numbers to be seen from any approach to the active portion, and be legible from a distance of at least 25 feet.

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Inspection Procedures - Section 265.14

Key Considerations:

- Do non-exempt facilities have a 24-hr surveillance system equivalent to either guards or television monitoring the active portion of the site, or do they have a barrier around the active portion of the site and a means to control entry, such as locked or monitored gates?

- Is all monitoring equipment functional and used properly? Are all locks functioning properly?

- Are a sufficient number of signs with the warning "Danger - Unauthorized Personnel Keep Out" posted at each entrance and at other locations in order to be seen from any approach?

Note: security may be around an entire complex of units or around individual units.

The danger signs need to be written in English and in any other language predominant in the area surrounding the facility. An example would be the required use of Spanish on a sign at a facility located in a county bordering Mexico.

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General Inspection Requirements

§265.15 General Inspection Requirements

(a) The owner/operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may lead to any release of hazards.

(b)(1) The owner/operator must develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment.

(2) The schedule must be kept at the facility.

(3) The schedule must identify the types of problems which are to be looked for during inspections.

(4) The frequency of inspection may vary for the items on the schedule. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use.

Note: §§265.174, 265.193, 265.195, 265.226, 265.260, 265.278, 265.304, 265.347, 265.377, 265.403, 265.1033, 265.1052, 265.1053, and 265.1058 establish inspection frequencies which must be complied with when appropriate.

(c) The owner/operator must remedy any deterioration which an inspection reveals in accordance with a schedule which ensures that the problem does not lead to an environmental hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

(d) The owner/operator must record inspections in an inspection log. These records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs. These records must be kept for at least three years.

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Inspection Procedures - Section 265.15

Remember :

- Review the facility's inspection schedule. The schedule and list of items to be checked should be included in the facility's log book.

- The items being inspected by the facility should include monitoring equipment, safety equipment, emergency response equipment, security devices, and operational and structural equipment.

- The schedule should specifically list the components being inspected and define the problems that might occur, e.g., deterioration of a liner, loss of pressure in a self-contained breathing apparatus.

- The frequency of inspection may vary, but areas subject to spills such as loading and unloading areas must be inspected daily when in use.

- The facility's inspections must be recorded in a log book or other summary. Each inspection should be dated, the inspector's full name recorded, all observations noted, and the date and nature of any repairs recorded.

The inspector should review all log book entries in order to determine whether inspections are being conducted with the specified frequency. The inspector should also note the number of times that a facility inspector has observed problems.

Facilities with logbooks without any visual observations recorded should be suspect as to whether the inspections are being done adequately or at all. Look at the most recent observation logs and see if your observations of the areas or unit agree with the log. It is also critical to check whether the facility has appropriately made repairs and recorded the nature and date of those repairs in the log. The inspection records must be kept for three years.

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Personnel Training

§265.16 Personnel Training

(a)(1) Facility personnel must successfully complete a program of training that teaches them to perform their duties in a way that ensures the facility's compliance with applicable requirements.

(2) This training program must be directed by a person trained in hazardous waste management procedures and must include instruction in hazardous waste management procedures relevant to the positions in which facility personnel are employed.

(3) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies.

(b) Facility personnel must successfully complete the training program within six months after the effective date of their employment or assignment to a facility, <u>or</u> to a new position at a facility.

(c) Facility personnel must take part in an annual review of the initial training.

(d) The facility owner/operator must maintain the following documents at the facility:

(1) The job title for each position related to hazardous waste management, and the name of the employee holding the position;

(2) A written job description for each position listed;

(3) A written description of the type and amount of both introductory and continuing training that will be given to each person; and

(4) Records documenting that the training or job experience requirements have been met.

(e) Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility.

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Inspection Procedures - Section 265.16

Key Considerations :

- Has the documentation of a facility's personnel training program been reviewed?
- Has everyone mentioned in the contingency plan been trained?
- Has a job title been given for each position? Be sure that a current employee's name is listed, and that a job description is provided.
- Is a description of the training to be provided and the training actually received by the employee also included?
- Is training reviewed annually with the employees?
- The owner/operator must identify the people that need training before a training program can be provided. Ask how the people given training were identified and assess whether this is a thorough approach.

The owner/operator must document that training has been provided to the facility personnel. Common forms of documentation include training session sign-up sheets or other means whereby each employee signs and dates a record once the training or annual update has been given. Note: Documentation of training may not be possible where workers do not have hazardous waste handler job classification due to union rules.

A facility's training program must enable personnel to respond effectively to emergencies. If possible, the inspector should ask to speak to a few employees to determine if they are familiar with steps to be taken in the case of a spill or similar emergency; in this way, he may be better able to verify that employee training has been provided. The determination whether a training program is adequate is often a professional judgment, but the inspector can refer to appropriate guidance in this matter.

☞ See discussion of OSHA/RCRA interface in Appendix I, "Keeping Up With RCRA."

- When initiating discussions with facility employees, an inspector should practice active listening which can often lead to uncovering additional facility problem areas.
- Both initial training and annual training updates must occur.
- Training must include emergency response training.

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Ignitable, Reactive, or Incompatible Wastes

§265.17 General Requirements for Ignitable, Reactive, or Incompatible Wastes

(a) These wastes must be separated and protected from sources of ignition or reaction, including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks, spontaneous ignition, and radiant heat. While ignitable waste is being handled, the owner/operator must confine smoking and open flame to specially designated locations. "No smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive wastes.

(b) Where required under Part 40, the treatment, storage, or disposal of ignitable or reactive wastes, and the mixture of incompatible wastes must be conducted so that they do not:

(1) Generate extreme heat or pressure, fire or explosion, or violent reaction;

(2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantity to threaten human health;

(3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fires or explosions; or

(4) Damage the structural integrity of the device or facility containing the waste.

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Inspection Procedures - Section 265.17

Key Considerations :

- Does a facility handle ignitable or reactive wastes, or wastes that might be incompatible when mixed? Determine this by reviewing the waste manifests or the waste analyses that are part of the operating record.

- Are "no smoking" signs placed conspicuously at facilities that handle ignitable wastes, and is the smoking ban enforced?

- Do any containers or tanks contain ignitable, reactive, or incompatible wastes? Is there any evidence of bulging or off-gassing? Wastes must not be allowed to damage containment structures and thereby cause releases.

Specific requirements for handling ignitable, reactive, or incompatible wastes are given under the unit specific subparts (I through R) of this section. Refer to Appendix V, "Additional Resources," for references that may provide additional information.

- Care must be taken to keep ignitable or reactive wastes away from sources of ignition or reaction.

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Subpart C - Preparedness and Prevention

§265.31 Maintenance and Operation of the Facility

Facilities must be maintained and operated to minimize the possibility of any unplanned, sudden or non-sudden, release of hazardous waste or constituents to air, soil, or surface water.

§265.32 Required Equipment

All facilities must be equipped with the following, unless none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) An internal communications or alarm system;

(b) A device, such as a telephone, capable of summoning emergency assistance from local emergency response teams;

(c) Portable fire extinguishers, fire control equipment, spill control and decontamination equipment; and

(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment.

§265.33 Testing and Maintenance of Equipment

All safety equipment must be tested and maintained.

§265.34 Access to Communications or Alarm Systems

(a) Whenever hazardous waste is being handled, all personnel involved must have immediate access to an internal alarm or emergency communication device.

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Inspection Procedures - Subpart C, Sections 265.31 through 265.34

Key Considerations :

- What is the general appearance and housekeeping of the facility? Are any potential problems apparent during the visual inspection phase?

- Are any inoperative devices and deteriorated, patched, or jury-rigged equipment apparent?

- **The inspector should:**

  -- **Ask to see the type of internal and external communication systems in use at the facility.**

  -- **Look for fire extinguishers and other equipment such as hoses, sprinklers, or foam; the equipment should be maintained and in good condition.**

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Subpart C - Preparedness and Prevention (continued)

§265.35 Required Aisle Space

The owner/operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, and spill control equipment to any areas of the facility.

§265.37 Arrangements with Local Authorities

(a) The owner/operator must attempt to make:

(1) Arrangements to familiarize emergency response teams with the layout of the facility, properties of the hazardous waste handled at the facility, and associated hazards;

(2) Agreements designating primary emergency authority and agreements with any other authorities to provide support;

(3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

(4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and associated hazards.

(b) The owner/operator must document in the operating record situations in which State or local authorities decline to enter into such arrangements.

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Inspection Procedures - Subpart C, Sections 265.35 through 265.37

Key Considerations :

- Have all local authorities been made aware of potential dangers at the site? Ask to see the agreements made with all appropriate local emergency response teams.

The owner/operator should provide proof that all local authorities were contacted, such as by producing a certified or registered letter, and that such authorities either agreed to a plan or have declined to participate.

The inspector should also verify that aisle space is adequate and unobstructed. A good rule-of-thumb is to determine whether the aisle space is adequate for the removal of one drum, or is at least two feet wide. Every individual drum must be able to be inspected and, in some cases, emergency equipment must have room to pass through the aisle space.

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Subpart D - Contingency Plan and Emergency Procedures

§265.51 Purpose and Implementation of Contingency Plan

(a) Each owner/operator must have a contingency plan for his facility which is designed to minimize hazards to human health or the environment from fires, explosions or any fires, explosions or unplanned releases of hazardous waste or waste constituents.

(b) The provisions of the contingency plan must be carried out whenever there is a situation which could threaten human health or the environment.

§265.52 Content of Contingency Plan

(a) The contingency plan must describe the actions facility personnel must take with respect to any fires, explosions, or unplanned sudden or non-sudden release.

(b) If the owner/operator has already prepared a Spill Prevention, Control, and Countermeasures Plan, he need only amend that plan to incorporate hazardous waste management provisions.

(c) The contingency plan must describe arrangements agreed to by local emergency response teams.

(d) The contingency plan must list names, addresses, and phone numbers of all persons qualified to act as emergency coordinator, and this list must be kept up to date.

(e) The contingency plan must include a list of all emergency equipment. In addition, the contingency plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(f) The contingency plan must include an evacuation plan for facility personnel.

§265.53 Copies of Contingency Plan

A copy of the contingency plan must be:

(a) Maintained at the facility; and
(b) Submitted to all local emergency response teams.

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Inspection Procedures - Subpart D, Sections 265.51 through 265.53

Key Considerations :

- Is the copy of the contingency plan on file at the facility detailed enough to deal with site-specific incidents?
- Does the contingency plan specify the name(s) of an emergency coordinator, his address, and office and home phone number? Is at least one backup or alternate emergency coordinator identified to ensure that one person is available at all times?
- Does the contingency plan include a list of all emergency equipment, as well as the location and general description of the capabilities of each item listed?
- Has a copy of the contingency plan been kept on file at the facility and another sent to local emergency response teams (police, fire departments)? Ask to see signed receipts of these plans from the appropriate agencies. Certified or registered mail receipts are acceptable, though the absence of a receipt is not, on its own, a violation of the regulations.

The contingency plan is required to be updated when personnel or equipment change, but this requirement is often overlooked. The inspector should verify that the individuals listed are current and that all the equipment listed can be located by the descriptions given. The inspector should ask to see selected equipment identified on the list to personally verify that at least certain safety equipment, such as showers or eye washes, work.

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Subpart D - Contingency Plan and Emergency Procedures (continued)

§265.54 Amendment of Contingency Plan

The contingency plan must be reviewed, and immediately amended, whenever:

(a) Regulations are revised;
(b) The plan fails in an emergency;
(c) The facility changes in such a manner that the new design or other circumstances increase the potential of hazardous waste releases, or require a change in emergency response procedure;
(d) The list of emergency coordinators changes; or
(e) The list of emergency equipment changes.

§265.55 Emergency Coordinator

At all times, there must be at least one employee at the facility or on call with the responsibility for coordinating all emergency response measures.

§265.56 Emergency Procedures

(a) When there is an emergency situation, the emergency coordinator must:

(1) Activate internal facility alarms; and

(2) Notify appropriate State or local agencies.

(b) The emergency coordinator must immediately identify the character, exact source, and amount of any released materials.

(c) The emergency coordinator must assess possible hazards to human health or the environment that may result from the release.

(d) If the facility has had a fire, explosion, or release, the emergency coordinator must report his findings to appropriate local authorities and the National Response Center or the 40 CFR Part 1510 on-scene coordinator.

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or any other material that results from a fire, explosion, or release.

(j) The time, date, and details of any incident that requires implementing the contingency plan must be recorded in the operating record. Within 15 days after the incident, the emergency coordinator must submit a written report on the incident to the Regional Administrator.

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Inspection Procedures - Subpart D, Sections 265.54 through 265.56

Key Considerations :

- Are the emergency coordinator and backup trained to carry out the provisions of the contingency plan?

During the file review, the inspector should look for reports of incidents requiring the implementation of the contingency plan. Special note should be made of situations in which the contingency plan should have been implemented but was not.

A facility must file a report with the Regional Administrator within fifteen days of any incident. During the inspection of a facility reporting such an incident, the inspector should view the involved area in order to check that any spilled or released material had been contained and disposed of properly, and that any equipment which was used has been decontaminated and is fit for reuse.

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Subpart E - Manifest System and Discrepancies

§265.71 Use of the Manifest System

(a) If a facility receives hazardous waste accompanied by a manifest, the owner/operator must:

(1) Sign and date each copy of the manifest;

(2) Note any significant discrepancies between the manifest and the waste;

(3) Give the transporter at least one copy of the manifest;

(4) Within 30 days, send a signed copy of the manifest to the generator; and

(5) Retain a copy of the manifest at the facility for at least three years from the date of delivery.

§265.72 Manifest Discrepancies

(a) Manifest discrepancies are differences between quantity or type of hazardous waste designated on the manifest and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies include: (1) for bulk waste, variations greater than 10 percent in weight; and (2) for batch waste, any variation in piece count.

(b) Upon discovering a significant discrepancy, the owner/operator must attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy is not resolved within 15 days, the owner/operator must immediately submit to the Regional Administrator a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest.

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Inspection Procedures - Subpart E, Sections 265.71 and 265.72

Key Considerations :

- Has a facility accepting offsite waste retained for three years signed and dated copies of manifests for the wastes it accepted?
- Has the facility, within 30 days of the receipt of the waste, returned a signed and dated copy of the manifest to the generator? Observe the dates on generator return copies to see if they are being held for longer than 30 days.
- Are there any discrepancies in files which must be recorded on the manifest document?
- Are any changes, cross-outs or write-overs evident in the manifests? If so, they should be closely reviewed.

Significant discrepancies in quantity are a variation of 10% for bulk waste and one piece, e.g. drums, for any batch waste. Incorrectly or inadequately identified waste is also a significant discrepancy. For any discrepancies noted on any manifest, the facility must have attempted to reconcile the discrepancy with the transporter(s) and generator within 15 days. Ask for verification of these attempts, such as letters or notes from a phone conversation. If the discrepancy was not resolved, the inspector should verify that a letter was sent to the Regional Administrator, describing the discrepancy and attempts to reconcile it and including a copy of the manifest at issue.

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Subpart E - Operating Record

§265.73 Operating Record

(a) A written operating record must be kept at each facility.

(b) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

(1) A description and an indication of the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal;

(2) The location of each hazardous waste within the facility and the quantity at each location. Include cross-references to specific manifest document numbers, for waste accompanied by a manifest;

(3) Records and results of waste analyses and trial tests;

(4) Summary reports and details of all incidents that require implementing the contingency plan;

(5) Records and results of inspections;

(6) Monitoring, testing, or analytical data where required;

(7) All closure cost estimates and post-closure cost estimates; and

(8) Notices and certification for land disposal ban.

§265.74 Availability, Retention, and Disposition of Records

(a) All records must be furnished upon request, for inspection.

(c) A copy of records of waste disposal locations and quantities must be submitted upon closure of the facility.

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Inspection Procedures - Subpart E, Sections 265.73 and 265.74

Key Considerations :

- Has the operating record been reviewed carefully? The review of the operating record is very important to the inspection of any TSDF.
- Does a facility's operating record contain all of the required information?
- Have all records and results of onsite inspections been kept as part of the operating record for three years?

Inspector should note that facilities often do not have all the items listed in §265.73(b)(1-8) in one file or designated area. If the information is somewhere on-site, the requirement is being met. Inspectors should, however, encourage owners/operators to gather these items in one central area under the control of one designated individual.

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Subpart E - Additional Reports

§265.75 Biennial Report

The owner/operator must submit a copy of a biennial report to the Regional Administrator by March 1 of each even numbered year. The following information must be included:

(a) The EPA identification number, name, and address of the facility;.

(b) The calendar year covered by the report;

(c) For off-site facilities, the EPA identification number of each hazardous waste generator;

(d) A description and the quantity of each hazardous waste received during the year;

(e) The method of treatment, storage, or disposal for each hazardous waste;

(f) Monitoring data where required;

(g) The most recent closure cost estimate and the most recent post-closure cost estimate;

(h&i) Description of waste minimization efforts; and

(j) A certification signed by the owner/operator of the facility.

§265.76 Unmanifested Waste Report

If a facility accepts any hazardous waste from an off-site source without an accompanying manifest and if the waste is not excluded from the manifest requirement, then the owner/operator must prepare and submit a single copy of a report to the Regional Administrator within fifteen days after receiving the waste. Such report must be designated "Unmanifested Waste Report" and include the following:

(a) The EPA identification number, name, and address of the facility;

(b) The date the facility received the waste;

(c) The EPA identification number, name, and address of the generator and the transporter, if available;

(d) A description and the quantity of each unmanifested hazardous waste;

(e) The method of treatment, storage, or disposal for each hazardous waste;

(f) The certification signed by the owner/operator of the facility; and

(g) A brief explanation of why the waste was unmanifested.

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Inspection Procedures - Subpart E, Sections 265.75 through 265.77

Remember:

- Ask to see the facility's Biennial Report and, if it is available, review the report for completeness (if it was not reviewed prior to the inspection).
- Review the unmanifested waste reports from facilities that accept waste from off-site generators. These documents should be reviewed for completeness.
- Be aware that conditionally exempt SQG wastes are excluded from the manifest requirement. See §265.76(g) for an explanation of what an owner/operator should do when receiving hazardous wastes from conditionally exempt SQGs.
- Ask to see any additional reports required under 40 CFR 265.77 for release, fire, explosion, ground-water contamination, and closure.

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Subpart E - Additional Reports (continued)

§265.77 Additional Reports

The owner/operator must also report to the Regional Administrator:

(a) Releases, fires, and explosions;

(b) Ground-water contamination and monitoring data;

(c) Facility closure; and

(d) Reports required under Part 265 Subparts AA and BB.

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Subpart F - Ground Water Monitoring

§265.90 Applicability

The owner/operator of a surface impoundment, landfill, or land treatment facility which is used to manage hazardous waste must implement a ground-water monitoring program capable of determining the facility's impact on the quality of ground water in the uppermost aquifer.

§265.91 Ground Water Monitoring System

(a) A ground water monitoring system must consist of:

(1) Monitoring wells (at least one) installed hydraulically upgradient.

(2) Monitoring wells (at least three) installed hydraulically downgradient at the limit of the waste management area.

(c) All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole.

§265.92 Sampling and Analysis

The owner/operator must also report to the Regional Administrator:

(a) The owner/operator must develop and follow a ground water sampling and analysis plan. The plan must include procedures and techniques for:

(1) Sample collection;

(2) Sample preservation and shipment;

(3) Analytical procedures; and

(4) Chain of custody control.

(b) The owner/operator must determine the concentration or value of the parameters specified in this paragraph:

(1) Parameters characterizing the suitability of the ground water as a drinking water supply;

(2) Parameters establishing ground water quality; and

(3) Parameters used as indicators of ground water contamination.

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Inspection Procedures - Subpart F, Sections 265.90 through 265.94

Important:

The Subpart F CEI inspection is not to be confused with the CME or O&M inspections which go beyond the scope of the CEI in evaluating ground water monitoring.

Since determining a facility's compliance with Subpart F is a very important component of ensuring a facility's overall compliance with RCRA, the inspector should review and refer to the RCRA Ground-Water Monitoring Technical Enforcement Guidance Document (TEGD). Also, he should refer to the RCRA Laboratory Audit Inspection Guidance manual if possible. This manual addresses the identification of error in monitoring well data.

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Subpart F - Ground Water Monitoring (continued)

§265.93 Preparation, Evaluation, and Response

(a) The owner/operator must prepare an outline of a ground water quality assessment program that is capable of determining:

(1) Whether hazardous waste or hazardous waste constituents have entered the ground water;

(2) The rate and extent of migration; and

(3) The concentrations of hazardous waste or hazardous waste constituents.

(c)(1) If the comparisons for the upgradient wells show a significant increase (or pH decrease), the owner/operator must submit this information to the Regional Administrator.

(2) If comparisons of downgradient wells show a significant increase (or pH decrease), the owner/operator must then immediately obtain additional ground water samples from downgradient wells where a significant difference was detected, to determine if the significant difference was the result of laboratory error.

(d)(1) If the analyses performed confirm the significant increase (or pH decrease), the owner/operator must provide written notice to the Regional Administrator--within seven days of the date of obtaining such confirmation.

(2) Within 15 days after notification is provided to the Regional Administrator, the owner/operator must submit to the Regional Administrator a specific plan for a ground water quality assessment program at the facility.

§265.94 Record Keeping and Reporting

(a) Unless the ground water is monitored to satisfy the requirements of §265.93(d)(4), the owner/operator must:

(1) Keep records of required analyses, associated ground water elevations and the evaluations required throughout the active life of the facility, and for disposal facilities, throughout the post-closure care period as well;

(2) Report the following ground water monitoring information to the Regional Administrator:

(i) During the first year: concentrations of the parameters listed in §265.92(b)(1);

(ii) Annually: concentrations of the parameters listed in 265.92(b)(3);

(iii) No later than March 1 following each calendar year: results of the evaluations of ground water surface elevations.

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Subpart G - Closure and Post-Closure

§265.112 Closure Plan

(a) By May 19, 1981 or by the end of six months after the effective date of the rule that first subjects a facility to the closure/post-closure requirements, the owner/operator of a hazardous waste management facility must have a written closure plan.

(b) The written closure plan must identify steps necessary to perform partial and/or final closure of the facility.

(c) The owner/operator may amend the closure plan at any time prior to the notification of partial or final closure of the facility. If the plan has been approved, the owner/operator must submit a written request for approval of a change to the Regional Administrator. Certain facility changes require owners/operators to revise their closure plans.

(d) The owner/operator must submit the closure plan to the Regional Administrator at least 180 days prior to the date on which he expects to begin closure of the first surface impoundment, waste pile, land treatment, or landfill unit, or final closure if it involves such a unit. If the owner/operator has an approved closure plan, the Regional Administrator must be notified at least 60 days prior to closure.

The owner/operator must submit a closure plan to the Regional Administrator at least 45 days prior to the date on which he expects to begin final closure of a facility having only tanks, container storage, or incinerator units. If the owner/operator has an approved closure plan, the Regional Administrator must be notified at least 45 days prior to closure. The owner/operator of a boiler or industrial furnace must submit a closure plan to the Regional Administrator at least 45 days prior to the date on which he expects to begin partial or final closure. If the owner/operator of a boiler or industrial furnace has an approved closure plan, the Regional Administrator must be notified at least 45 days prior to partial or final closure.

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Inspection Procedures - Subpart G, Section 265.112

Key Considerations:

- Has the closure plan been updated and current?

Note: only facilities with approved closure plans are required to submit a request to EPA in order to change their closure plans.

In the case of many interim status facilities, the inspector is the only official that has an opportunity to evaluate the completeness of a plan prior to closure and submittal of the plan to the Administrator. Therefore, the inspector should closely evaluate the contents of the plan to verify that the required steps are adequately addressed and that all units are covered by the plan.

The owner/operator must expect to begin closure within 30 days after receiving the last shipment of waste, and notification and submittal of the closure plan to EPA must occur by the specified time period depending upon the nature of the unit. If the inspector feels that a unit does not have the capacity to manage additional wastes, he should question the owner/operator about the anticipated date when operations cease and the submittal of the closure plan in the required time period.

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Subpart G - Closure and Post-Closure (continued)

§265.113 Closure

(a) Within 90 days after receiving the final volume of hazardous wastes, or within 90 days after approval of the closure plan, the owner/operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan.

(b) Within 180 days after receiving the final volume of hazardous wastes, the owner/operator must complete final closure.

(d) The Regional Administrator may allow an owner/operator to receive non-hazardous wastes in a landfill, land treatment, or surface impoundment if a Part B application is submitted that demonstrates existing design capacity, that non-hazardous waste will be received within one year after final hazardous waste receipt, and that all wastes will be compatible.

§265.114 Disposal or Decontamination

All contaminated equipment, structures and soil must be properly disposed of, or decontaminated.

§265.115 Certification

Within 60 days of completion of closure, the owner/operator must submit to the Regional Administrator a certification that the hazardous waste management unit or facility has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner/operator and an independent professional engineer.

§265.116 Survey Plat

An owner/operator must submit to the local authority with jurisdiction over local land use, and to the Regional Administrator, a survey plat indicating the location and dimensions of landfill cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks.

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Inspection Procedures - Subpart G, Sections 265.113 through 265.116

Key Considerations:

- Have any activities or sections been shut down? If so, have the appropriate partial closure steps been taken? Be aware that the owner/operator may close certain units but not the whole facility.

- Has closure or partial closure been completed within 180 days after receipt of the last shipment of waste? If not, has the Administrator approved an extension?

- Has closure been completed properly and all wastes or materials been properly disposed of or decontaminated? Closed unit(s) should be visually inspected.

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Subpart G - Closure and Post-Closure (continued)

§265.117 Closure Care

(a)(1) Post-closure care for each hazardous waste management unit subject to the requirements must begin after completion of closure of the unit and continue for 30 years after that date.

§265.118 Post-Closure Plan

(a) By May 19, 1981, the owner/operator of a hazardous waste disposal unit must have a written post-closure plan.

§265.119 Post-Closure Notice

(a) No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner/operator must submit to the local authority with jurisdiction over local land use, and to the Regional Administrator, a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility.

(b) Within 60 days of certification of closure:

(1) Record, in accordance with applicable State law, a notation on the deed to the facility property to the effect that:

(i) The land has been used to manage hazardous wastes; and

(ii) Its use is restricted under 40 CFR Subpart G regulations.

§265.120 Certification of Completion of Post-Closure

No later than 60 days after the completion of the established post-closure care period for each hazardous waste disposal unit, the owner/operator must submit to the Regional Administrator a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan.

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Inspection Procedures - Subpart G, Sections 265.117 through 265.120

Key Considerations:

- Does the facility have a post-closure plan? Note: only land disposal facilities are required to have post-closure plans.

- Is the post-closure plan current? Note: only facilities with approved post-closure plans need submit a request to EPA in order to update their post closure plans.

In the case of many interim status facilities, the inspector is the only official that has an opportunity to evaluate the completeness of the plan prior to closure and submittal of the plan to the Administrator. The inspector should closely evaluate the contents of the plan to verify that the maintenance and monitoring requirements are adequately addressed.

The owner/operator must submit the post-closure plan in the same time frame as the closure plan for land disposal units. Certain units may be under post-closure care while the facility is still operating other units. The inspector should ask if any units, specifically disposal units, are closed and should be under post-closure care.

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Subpart H - Financial Requirements

§265.142 Cost Estimate for Closure

(a) The owner/operator must have a detailed written estimate of the cost of closing the facility under the closure plan. The estimate must include the highest costs possible for closure. The costs must be based on third party closure and cannot incorporate any salvage value.

(b) The closure cost estimate must be adjusted annually for inflation.

(c) The closure cost estimate must be revised within 30 days of a revision to the closure plan.

(d) The closure cost estimate must be kept at the facility during the operating life. Revisions must be deleted.

§265.143 Financial Assurance for Closure

The owner/operator must establish financial assurance for closure of the facility by choosing one of the following options:

(a) Closure trust fund;

(b) Surety bond guaranteeing payment into a closure trust fund;

(c) Closure letter of credit;

(d) Closure insurance;

(e) Financial test or corporate guarantee for closure;

(f) Use of multiple financial mechanisms;

(g) Use of State-required mechanism (under §265.149); or

(h) State assumption of responsibility (under §265.150).

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Inspection Procedures - Subpart H, Sections 265.142 and 265.143

Key Considerations:

- Does the facility have the required copy of the cost estimate onsite?
- Which financial mechanism has the owner/operator elected to use?

Remember: verify that the cost estimate includes third-party closure costs and is updated within 30 days of any significant revisions to the closure plan or when the closure plan is submitted to EPA. Documentation of financial assurance is not required to be kept at the facility and may be kept at a central or corporate location and filed with the Region.

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Subpart H - Financial Requirements (continued)

§265.144 Cost Estimate for Closure Care

(a) The owner/operator must have a detailed written estimate of the cost of post-closure care for the facility as required. The estimate must be based upon third party costs and is determined by multiplying the annual post-closure cost by the number of years of care.

(b) The post-closure care cost estimate must be adjusted annually for inflation.

(c) The post-closure cost care estimate must be revised within 30 days of a revision to the closure plan.

(d) The post-closure cost estimate must be kept at the facility during its operating life and be dated when adjusted for inflation.

§265.145 Financial Assurance for Post-Closure Care

The owner/operator must establish financial assurance for closure of the facility by choosing one of these options:

(a) Post-closure trust fund;

(b) Surety bond guarantee payment into a post-closure trust fund;

(c) Post-closure letter of credit;

(d) Post-closure insurance;

(e) Financial test or corporate guarantee for post-closure care;

(f) Use of multiple financial mechanisms for multiple facilities;

(g) Use of State-required mechanism (under §265.149); or

(h) State assumption of responsibility (under §265.150).

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Inspection Procedures - Subpart H, Sections 265.144 and 265.145

Key Considerations:

- Does the facility have on-site the required copy of the cost estimate for post-closure care?
- Has a copy of the cost estimate for post-closure care and the documentation of financial assurance for the post-closure care period been reviewed?

Remember: verify that the cost estimate includes third-party closure costs and is updated within 30 days of any significant revisions to the post-closure care plans or when the post-closure care plan is submitted to EPA. Documentation of financial assurance for post-closure care is not required to be kept at the facility and may be kept at a central or corporate location and filed with the Region. Ask which financial mechanism the owner/operator has elected to use.

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Subpart H - Financial Requirements (continued)

§265.147 Liability Requirements

(a) Coverage for sudden accidental occurrences must be maintained by the owner/operator. Possession of liability assurance may be demonstrated in one of six ways:

(l) Obtaining liability insurance;

(2) Passing a financial test for liability or using a guarantee;

(3) Obtaining a letter of credit;

(4) Obtaining a surety bond; or

(5) Obtaining a trust fund;

(6) Using combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, with the exceptions specified in this paragraph;

(7) Using a State-required mechanism; or

(8) Using State assumption of responsibility.

(b) Coverage for non-sudden accidental occurrences must be maintained for surface impoundments, landfills, and land treatment units. Possession of the required liability assurance can be demonstrated in one of the following ways:

(l) Obtaining liability insurance;

(2) Passing a financial test for liability or using a guarantee;

(3) Obtaining a letter of credit;

(4) Obtaining a surety bond;

(5) Obtaining a trust fund;

(6) A combination of the above mechanisms, with the exceptions specified in this paragraph;

(7) Using a State-required mechanism; or

(8) Using State assumption of responsibility.

(c) The owner/operator can request a variance and the Regional Administrator may adjust the required level of financial responsibility.

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Inspection Procedures - Subpart H, Sections 265.147 through 265.150

Key Considerations:

- If a facility has lost its liability coverage, has the owner/operator submitted the closure plan and stopped accepting wastes?

Note: proof of liability coverage does not have to be onsite but must be on file with the Regional Administrator or the State.

For facilities in interim status on November 8, 1984, each owner/operator was required to submit documentation of liability insurance to the Regional Administrator by November 8, 1985, or meet the financial test requirements, obtain a waiver, or have a State guarantee. Facilities that are newly regulated after November 8, 1984 have one year to meet these requirements. Unless a facility has met one of these requirements, it has lost interim status and must close.

During the pre-inspection review, documentation of liability insurance or a demonstration of meeting the financial test should be verified. At facilities that have lost interim status, the inspector should verify that the facility is no longer accepting wastes, and that the closure plan, post-closure care plan (when applicable) and cost estimates have been submitted. At facilities where EPA has approved the plans, the inspector should verify that closure and post-closure activities are being appropriately carried out.

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Subpart H - Financial Requirements (continued)

§265.147 Liability Requirements (continued)

(d) If the Regional Administrator determines that the levels of financial responsibility required by paragraph (a) or (b) are not consistent with the degree and duration of risk associated with the TSDF, the Regional Administrator may adjust the level of financial responsibility.

§265.148 Incapacity of Owners/Operators, Guarantors, or Financial Institutions

(a) An owner/operator or guarantor must notify the Regional Administrator of the commencement of proceedings under Title 11 (Bankruptcy), U.S. Code, naming the owner/operator as debtor, within 10 days after commencement of such proceedings.

(b) An owner/operator who fulfills the requirements of §§265.143, 265.145, or 265.147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed without financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution. The owner/operator must establish other financial assurance or liability coverage within 60 days after such an event.

§265.149 Use of State-Required Mechanisms

(a) For a facility located in a State where EPA is administering the requirements of Subpart H, but where the State has hazardous waste regulations that include requirements for financial assurance or liability coverage, an owner/operator may use State-required financial mechanisms to meet the requirements of §§265.143, 265.145, or 265.147.

(b) If a State-required mechanism is found acceptable as specified in paragraph (a), the owner/operator may satisfy financial mechanisms through the use of the State mechanism.

§266.150 State Assumption of Responsibility

(a) If a State either assumes legal responsibility for an owner/operator's compliance with Subpart H or assures that funds from State sources will be available to cover these requirements, the Regional Administrator determines that the State's assumption of responsibility is at least equivalent to the financial mechanisms specified in this subpart.

(b) If a State's assumption of responsibility is found acceptable as specified in paragraph (a), the owner/operator may satisfy the requirements of this subpart by use of State and additional mechanisms.

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Subpart I - Containers

§265.171 Condition of Containers

If a container holding hazardous waste is not in good condition, the owner/operator must transfer the hazardous waste from that container to a container that is in good condition.

§265.172 Compatibility of Waste with Container

The owner/operator must use a container made of, or lined with, materials which will not react with the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

§265.173 Management of Containers

(a) A container holding hazardous waste must always be closed during storage.

(b) A container holding hazardous waste must not be opened, handled, or stored so that the container may rupture or leak.

§265.174 Inspections

The owner/operator must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

§265.176 Ignitable or Reactive Wastes

Containers holding ignitable or reactive waste must be located at least 15 meters from the facility's property line.

§265.177 Special Requirements for Incompatible Wastes

(a) Incompatible wastes must not be placed in the same container.

(b) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste.

(c) A storage container holding a hazardous waste that is incompatible with other materials must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

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Inspection Procedures - Subpart I, Sections 265.171 through 265.177

During an inspection of a container storage area, consider the following issues:

- The security around the unit;
- The condition of the containers (leaks, deterioration or signs of incompatibility such as swollen drums, corrosion or off-gassing);
- The sufficiency of aisle space;
- The existence of dead vegetation or stains in the storage run-off area;
- The condition of safety and emergency equipment;
- Whether evidence of past spills correlates with the operating record;
- Whether any drums are stored in unauthorized areas; and
- Whether the container storage areas are inspected at least weekly.

If the containers are storing ignitable or reactive waste and are located within 15 meters of the property boundary but inside a structure, the owner/operator should have a waiver from the local fire marshall. Even with a waiver, the acceptability of this practice must be evaluated on a case-by-case basis. Containers must be handled safely. Check with the owner/operator on how they handle the containers, i.e. by hand or fork truck.

The inspector should be aware that some States require secondary containment of the storage area for generators accumulating wastes for less than 90 days. See Section 264, Subpart I.

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Subpart J - Tanks

§265.190 Applicability

These regulations apply to all tank systems used to store or treat hazardous waste except:

(a) Tanks used for wastes without free liquids that are in a building with an impermeable floor.

(b) Tanks, including sumps, that are part of a secondary containment system.

The above tanks are exempted only from §265.193, setting forth secondary containment requirements.

§265.191 Assessment of Existing Tank System's Integrity

(a) Existing tank systems without secondary containment (§265.193) must have a written assessment certified by an independent, qualified registered professional engineer (IQPRE) attesting to its integrity.

(b) The assessment must consider the following:

(l) Design standards;

(2) Characteristics of the waste;

(3) Existing corrosion protection;

(4) Documented age of system if available or, otherwise, an estimate of age; and

(5) Results of leak tests, internal inspections or other integrity exams.

(d) If the tank system is unfit for use, it must be taken out of service and repaired or retrofitted appropriately before reuse, or replaced, in compliance with §265.196.

§265.192 Design and Installation of New Tank Systems or Components

(a) New tank systems or components must be certified by an IQPRE for structural integrity and compliance with design standards. All components in contact with soil or water must be evaluated by a corrosion expert.

(b) During the installation of a new tank system or component and prior to its use, an IQPRE or an independent qualified installation inspector must inspect the system.

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Inspection Procedures - Subpart J, Sections 265.190 through 265.201

Key Considerations:

- Are new tanks adequately designed and properly installed with appropriate documentation?
- Is secondary containment provided when required?
- Are inspection and recordkeeping requirements being met?
- Are spill and overfill prevention measures adequate and operational?
- Are annual assessments being completed?

Remember: the regulations which are applicable to above-, on-, in-, and underground tanks that can be entered apply in States without authorized RCRA programs only, unless a State amends its statute. Requirements for the permitting of unenterable, underground tank systems, new underground tank systems, and SQGs apply in all States. Detailed inspection procedures are provided in the "Inspection Manual for Hazardous Waste Storage and Treatment Tank Systems". Also see Appendix IV for relevant checklists.

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Subpart J - Tanks (continued)

§265.192 Design and Installation of New Tank Systems or Components (continued)

(c) All back fill material must be non-corrosive, porous, and homogeneous.

(d) All tanks and ancillary equipment must be tested for tightness.

(e) Ancillary equipment must be protected.

(f) The owner/operator must provide necessary corrosion protection.

(g) Written statements and certification for design and installation must be kept on file.

§265.193 Containment and Detection of Releases

(a) Secondary containment must be provided as follows:

(l) All new tank systems or components prior to use.

(2) All existing tank systems handling dioxin wastes by January 12, 1989.

(3) Existing tank systems of known age by January 12, 1989 or by 15 years of age, whichever comes later.

(4) For existing tank systems without documented age not later than January 12, 1995 or, if the facility is greater than seven years old, by the time the facility is 15 years old, or by January 12, 1989, whichever is later.

(5) Secondary containment systems must:

(l) Prevent migration of any wastes or accumulated liquids.

(2) Be capable of detecting and collecting any releases.

(c) The containment systems must be compatible with the wastes or liners, prevent failure, provide leak detection, and be designed to remove any liquid.

(f) Ancillary equipment (such as pipes or sumps) must be provided with full secondary containment.

(i) All tank systems must conduct a leak test at least annually until such time as secondary containment meeting the requirements of §265.193 is provided. The results of such tests must be retained on file at the facility.

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Subpart J - Tanks (continued)

§265.194 General Operating Requirements

(a) Hazardous wastes may not be placed in a tank system if they can cause it to fail.

(b) Spills and overflows must be prevented.

§265.195 Inspections

(a) The owner/operator must inspect the following daily:

(l) Overfill and spill control equipment;

(2) Aboveground portions of tank system;

(3) Data from monitoring and leak detection equipment; and

(4) Area surrounding externally accessible portion of tank system.

(b) Cathodic protection systems must be inspected within 6 months after installation and annually afterwards. Impressed current sources must be tested bimonthly.

(c) The inspections must be documented in the operating record.

§265.196 Response to Leaks and Disposition of Unfit Tank Systems

If there has been a leak or spill, or if the tank system is unfit for use, the following must be done:

(a) Stop adding wastes;

(b) Remove waste from tank system;

(c) Contain visible releases;

(d) Report to Regional Administrator as appropriate;

(e) Provide secondary containment, repair, or close; and

(f) Certify major repairs.

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Subpart J - Tanks (continued)

§265.197 Closure and Post-Closure Care

(a) At closure, the owner/operator must remove or decontaminate all material; or

(b) The owner/operator can close the tank system as a landfill (§265.310).

(c) For tanks without secondary containment, closure plans and financial assurance must be prepared for both closure options.

§265.198 Special Requirements for Ignitable or Reactive Wastes

(a) Ignitable or reactive waste must not be placed in a tank unless:

(l) The waste has been treated so that it is no longer ignitable or reactive; or

(2) The tank is protected from conditions that may cause the waste to ignite or react; or

(3) The tank is used only for emergencies; and

(b) The owner/operator maintains a protective distance between the waste and any public ways or adjoining properties.

§265.199 Special Requirements for Incompatible Wastes

(a) Incompatible wastes must not be placed in the same tank system.

(b) Tanks must be decontaminated prior to holding incompatible wastes.

§265.200 Waste Analysis and Trial Tests

Whenever a tank system is to be used to treat or to store a hazardous waste that is substantially different from the waste previously handled in that tank system, or to treat old waste with a different process, an owner/operator must:

(a) Conduct waste analyses and trial treatment or storage tests.

(b) Obtain written documented information on similar waste under similar operating conditions.

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Subpart J - Tanks (continued)

§265.201 Special Requirements for SQGs That Accumulate Waste in Tanks

(a) The following requirements apply to SQGs that accumulate hazardous waste in tanks for less than 180 days (or 270 days if the waste is shipped over 200 miles), and do not accumulate over 6,000 kg on-site at any time.

(b) Generators must comply with the following general operating requirements:

(2) Hazardous wastes must not be placed in a tank if they could cause it to fail before the end of its intended life;

(3) Uncovered tanks must have at least 60 centimeters of freeboard unless provisions are made to otherwise contain at least the volume of the top 60 centimeters; and

(4) On tanks with a continuous feed, the tank must be equipped with a means to stop this inflow.

(c) Generators must inspect:

(l) Discharge control equipment at least once each operating day;

(2) Data from monitoring equipment at least once each operating day;

(3) The level of waste in the tank at least once each operating day;

(4) The construction materials of the tank at least weekly; and

(5) The construction materials of the discharge confinement structures and the area immediately surrounding each of them at least weekly.

(d) Upon closure of the facility, SQGs must remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

(e) Generators must comply with requirements for ignitable or reactive waste.

(f) Generators must comply with above requirements for incompatible wastes.

See page III-284 for discussion of §268.7 requirements for generators treating waste in storage tanks or containers.

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Subpart K - Surface Impoundments

§265.221 Design Requirements

(a) The owner/operator of a surface impoundment must install two or more liners and a leachate collection system for each new unit, replacement unit, or lateral expansion.

(b) The owner/operator of each unit must notify the Regional Administrator at least sixty days prior to receiving waste.

(c) If the owner/operator demonstrates that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as liners and leachate collection systems, the requirements for such may be waived.

(d) The double liner requirement may be waived for any monofill if:

(l) The monofill contains wastes from foundry furnace emission controls or metal casting molding sand, and are not EP toxic; and

(2) The monofill has at least one liner and

(A) There is no evidence the liner is leaking;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water; and

(C) The monofill is in compliance with groundwater monitoring requirements.

§265.222 General Operating Requirements

(a) A surface impoundment must have enough freeboard to prevent any overtopping of the dike by overfilling, wave action, or a storm.

(b) A freeboard level less than 60 centimeters may be maintained if the owner/operator obtains certification by a qualified engineer.

§265.223 Containment System

All earthen dikes must have a protective cover.

§265.225 Waste Analysis and Trial Tests

Additional waste analyses are required when a surface impoundment is used to:

(l) Chemically treat a hazardous waste which is different from waste treated previously;

(2) Chemically treat hazardous waste with a different process from that used previously.

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Inspection Procedures - Subpart K, Sections 265.221 through 265.230

Key Considerations:

- Is there adequate freeboard?
- Has any replacement or lateral expansion of a unit included the installation of two or more liners and a leachate collection system? In addition, has the Part B application been filed, or a waiver been obtained?
- Does the waste analysis plan include procedures to determine treatability or compatibility of wastes in surface impoundments?
- Placement of wastes in a surface impoundment meets the definition of land disposal under §268.2(c). Therefore, no hazardous wastes which are subject to LDR may be placed in a surface impoundment unless they meet treatment standards in Part 268, Subpart D or qualify for the treatment in surface impoundment exemption in §268.4.
- Are required inspections conducted?

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Subpart K - Surface Impoundments (continued)

§265.226 Inspections

(a) The owner/operator must inspect:

(l) The freeboard level at least once each operating day, and

(2) The surface impoundment at least once a week to detect any leaks, deterioration, or failures in the impoundment.

§265.228 Closure and Post-Closure Care

(a) At closure, the owner/operator must:

(l) Remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment, and manage them as hazardous waste; or

(2) Close the impoundment and provide post-closure care for a landfill under Subpart G and §265.310, including the following steps:

(i) Eliminate free liquids;
(ii) Stabilize remaining wastes; and
(iii) Cover the surface impoundment with a final cover.

(b) In addition to the requirements of Subpart G, and §265.310, during the post-closure care period, the owner/operator of a surface impoundment with waste remaining after closure must:

(1) Maintain the integrity and effectiveness of the final cover;
(2) Maintain and monitor a leak detection system;
(3) Maintain and monitor the groundwater monitoring system; and
(4) Prevent run-on and run-off from damaging the final cover.

§265.229 Special Requirements for Ignitable or Reactive Wastes

Ignitable or reactive waste must not be placed in a surface impoundment unless the waste and impoundment satisfy all applicable requirements of LDR and:

(a) The waste is treated so that the resulting waste mixture no longer meets the definition of ignitable or reactive waste and §265.17(b) is complied with; or

(b) (1) The waste is managed so that it is protected from any conditions which may cause it to ignite or react and maintain and monitor the leak detection systems; <u>or</u>
(2) The owner/operator obtains a certification that the design features or operating plans of the facility will prevent ignition or reaction; or

(c) The surface impoundment is used solely for emergencies.

§265.230 Special Requirements for Incompatible Wastes

(a) Incompatible wastes must not be placed in the same surface impoundments.

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Subpart L - Waste Piles

§265.251 Protection from Wind

The owner/operator must cover the waste pile or control wind dispersion.

§265.252 Waste Analysis

The owner/operator must analyze a representative sample of waste from each incoming movement unless the wastes the facility receives which are amenable to piling are compatible.

§265.253 Containment

If leachate or run-off from a pile is a hazardous waste, then either:

(a)(l) The pile must be placed on a compatible impermeable base;

(2) The owner/operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the pile during peak discharge from at least a 25-year storm;

(3) The owner/operator must design, construct, operate, and maintain a run-off management system to collect the water volume resulting from a 24-hour, 25-year storm; and

(4) Collection and holding facilities must be emptied promptly; or

(b)(l) The pile must be protected from precipitation and run-on by some other means; and

(2) No liquids or wastes containing free liquids may be placed in the pile.

§265.254 Design Requirements

The owner/operator of a waste pile is subject to the requirements for liners and leachate collection systems with respect to each new unit, replacement of unit, or lateral expansion.

§265.256 Special Requirements for Ignitable or Reactive Wastes

(a) Ignitable or reactive wastes must not be placed in a pile unless the waste and pile satisfy all applicable LDR requirements and:

(l) Addition of the waste to an existing pile

(i) Results in the waste or mixture no longer meeting the definition of ignitable or reactive waste; and
(ii) Complies with §265.17(b); or

(2) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

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Inspection Procedures - Subpart L, Sections 265.251 through 265.257

Key Considerations:

- What is the impermeability of the waste pile base and is it compatible with the waste?
- Is the run-off management system adequate?
- Are the evaluation and disposal method for contaminated runoff adequate?
- Do replacement units or lateral expansions have the required liners and a leachate collection system?
- Is the method used to control wind dispersion (usually a tarp or location inside a structure) adequate?

Placement of wastes in a waste pile meets the definition of land disposal under §268.2(c). Therefore, no hazardous wastes which are subject to LDR may be placed in a waste pile unless they meet treatment standards in Part 268, Subpart D.

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Subpart L - Waste Piles (continued)

§265.257 Special Requirements for Incompatible Wastes

(a) Incompatible wastes must not be placed in the same pile unless §265.17(b) is complied with (i.e., the wastes do not give off heat, vapors, fumes, etc.).

(b) A pile of hazardous waste that is incompatible with any waste or other material must be separated from the other materials, or protected from them by means of a dike, berm, or other device.

(c) Incompatible hazardous waste must not be piled on the same area unless that area has been decontaminated sufficiently.

§265.258 Closure and Post-Closure Care

(a) At closure, the owner/operator must remove or decontaminate all waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste.

(b) If the owner/operator finds that not all contaminated subsoils, structures, and equipment can be practicably removed or decontaminated, he must close the facility and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills.

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Subpart M - Land Treatment

§265.272 General Operating Requirements

(a) Hazardous waste must not be placed in or on a land treatment facility unless the waste can be made less hazardous or non-hazardous by degradation, transformation, or immobilization processes occurring in or on the soil.

(b) The owner/operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portions of the facility during peak discharge from at least a 25-year storm.

(c) The owner/operator must design, construct, operate, and maintain a runoff management system capable of collecting and controlling a water volume at least equivalent to a 24-hour, 25-year storm.

(d) Collection and holding facilities must be emptied or otherwise expeditiously managed after storms.

(e) If the treatment zone contains matter subject to wind dispersal, the owner/operator must control wind dispersal.

§265.273 Waste Analysis

In addition to the waste analyses required by §265.13, before treating a hazardous waste in a land treatment facility, the owner/operator must:

(a) Determine the concentrations in the waste of any substances which exceed the maximum concentrations of constituents that cause a waste to exhibit the EP toxicity characteristic;

(b) For any waste listed, determine the concentrations of any substances which caused the waste to be listed as a hazardous waste; and

(c) If food chain crops are grown, determine the concentrations in the waste of arsenic, cadmium, lead, and mercury unless the owner/operator has written, documented data that show that the constituent is not present.

§265.276 Food Chain Crops

(a) An owner/operator of a land treatment facility on which food chain crops are being grown, or have been or will be grown, must notify the Regional Administrator within 60 days.

(b)(l) Food chain crops must not be grown on the treated area of a land treatment facility unless the owner/operator can demonstrate based on field testing, that any arsenic, lead, mercury, or other constituents identified:

(i) Will not be transferred to the food portion of the crop;

(ii) Will not occur in greater concentrations in crops grown on the land treatment facility than in the same crops grown on untreated soils.

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Inspection Procedures - Subpart M, Sections 265.272 through 265.282

Key Considerations:

- Is the run-off management system adequate?
- Is the evaluation and disposal method of contaminated runoff adequate?
- Does the waste analysis plan include procedures to evaluate all substances for which the applied waste was listed or is TCLP toxic?
- What is the type of cover crop being grown, particularly on closed units? Could it be, or is it already being, used as a food chain crop?

While inspecting a land treatment unit, also consider the following:

- Land treatment facilities operating under interim status may submit existing operating data as part of the Land Treatment Demonstration required under the Part 264 permitting process; however, they cannot apply any new waste as part of the demonstration under interim status without obtaining a short-term or two-phase permit.
- Some practices such as discharge into a septic field may qualify as land treatment.
- Placement of wastes in a land treatment unit meets the definition of land disposal under §268.2(c). Therefore, no hazardous wastes subject to LDR may be placed in a land treatment unit unless they already meet treatment standards.

The inspector should refer to the "Permit Guidance Manual on Hazardous Waste Land Treatment Demonstrations."

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Subpart M - Land Treatment (continued)

§265.278 Unsaturated Zone Monitoring

(a) The owner/operator must have in writing, and must implement, an unsaturated zone monitoring plan which is designed to:

(l) Detect the vertical migration of hazardous waste constituents under the active portion of the land treatment facility, and
(2) Provide information on the background concentrations of the hazardous waste constituents in untreated soils nearby;

(b) The unsaturated zone monitoring plan must include:

(l) Soil monitoring using soil cores; and
(2) Soil-pore water monitoring using devices such as lysimeters.

§265.279 Recordkeeping

The operating record must include waste application dates and rates.

§265.280 Closure and Post-Closure Care

(a) In the closure plan and the post-closure plan, the owner/operator must address the following objectives:

(l) Control of the migration of hazardous constituents from the treated area into ground water;
(2) Control of the release of contaminated run-off from entering surface water;
(3) Control of the release of airborne particulate contaminants caused by wind erosion; and
(4) The growth of food-chain crops.

(b) The owner/operator must consider at least the following for closure and post-closure care:

(l) Type and amount of hazardous waste and constituents applied;
(2) The mobility and the expected rate of migration;
(3) Site location, topography, and surrounding land use;
(4) Climate;
(5) Geological and soil profiles and surface and subsurface hydrology and soil characteristics;
(6) Unsaturated zone monitoring;
(7) Type, concentration, and depth of migration of hazardous waste constituents in the soil as compared to background.

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Subpart M - Land Treatment (continued)

§265.280 Closure and Post-Closure Care (continued)

(c) The owner/operator must consider:

(l) Removal of contaminated soils;
(2) Placement of a final cover; and
(3) Monitoring of ground water.

(d) During the closure period, the owner/operator of a land treatment facility must:

(l) Continue unsaturated zone monitoring specified in the closure plan;
(2) Maintain the run-on control;
(3) Maintain the run-off management system; and
(4) Control wind dispersal.

(e) When closure is completed, the owner/operator must submit to the Regional Administrator certification from the owner/operator and an independent qualified soil scientist.

(f) During post-closure care, the owner/operator of a land treatment unit must:

(l) Continue soil-core monitoring;
(2) Restrict access to the unit;
(3) Assure that growth of food chain crops complies; and
(4) Control wind dispersal of hazardous waste.

§265.281 Special Requirements for Ignitable or Reactive Wastes

An owner/operator must not apply ignitable or reactive waste to the treatment zone unless the waste and treatment zone meet all applicable LDR requirements, and:

(a) The waste is immediately incorporated into the soil so that the resulting mixture no longer is ignitable or reactive; and

(b) Section 264.17(b) is complied with; or the waste is managed such that it is protected from any material or conditions which may cause it to ignite or react.

§265.282 Special Requirements for Incompatible Wastes

Incompatible wastes must not be placed in the same land treatment area unless heat, vapors, or fumes are not generated.

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Subpart N - Landfills

§265. 301 Design Requirements

(a) The owner/operator of a landfill must install two or more liners and leachate collection systems above and between such liners for each new unit, replacement unit, or lateral expansion.

(b) The owner/operator of each unit must notify the Regional Administrator at least sixty days prior to receiving waste.

(c) The owner/operator may demonstrate that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as liners and leachate collection systems and the requirements may be waived.

(d) The double liner requirement may be waived for any monofill, if:

(l) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and is not hazardous for reasons other than the EP toxicity characteristic.

(2)(i)(A) The monofill has at least one liner for which there is no evidence of leaking;

(B) The monofill is located more than one-quarter mile from a drinking source well; and

(C) The monofill complies with ground water monitoring requirements for permitted facilities; or

(2)(ii) The owner/operator demonstrates that the monofill is located, designed, and operated so that no migration will occur in the future.

§265. 301 General Operating Requirements

(a) The owner/operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from at least a 25-year storm.

(b) The owner/operator must design, construct, operate, and maintain a run-off management system to collect and control volume from a 24-hour, 25-year storm.

(c) Collection and holding facilities must be emptied expeditiously.

(d) The owner/operator of a landfill subject to wind must control wind dispersal.

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Inspection Procedures - Subpart N, Sections 265.301 through 265.316

Key Considerations:

- Is the map providing the location and cell dimensions, and the contents of each cell, adequate?
- Is the evaluation and disposal method of contaminated runoff adequate?
- What is the integrity of the final cover during the post-closure period?
- Is the maintenance of the groundwater monitoring system adequate?

While inspecting a landfill, remember that any replacement or lateral expansion of a unit requires two or more liners and a leachate collection system plus the filing of a Part B application (or the attainment of a waiver).

> Section 3004 of RCRA requires that certain landfills meet minimum technological requirements (MTRs), including double liners and a leachate collection system, within four years of being subject to regulation. Part 268 has given additional importance to the "min-tech" requirements but does allow non-MTR impoundments four years to retrofit even if they receive wastes subject to a national capacity variance or a case-by-case extension.

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Subpart N - Landfills (continued)

§265.309 Surveying and Recordkeeping

The owner/operator of a landfill must maintain the following in the operating record:

(a) A map of the exact location, dimensions, and depth of each cell; and

(b) The contents of each cell and the location of each hazardous waste type within each cell.

§265.310 Closure and Post-Closure Care

(a) At final closure of the landfill or of any cell, the owner/operator must cover the landfill or cell with a final cover designed and constructed to:

(l) Provide long-term minimization of migration of liquids through the closed landfill;

(2) Function with minimum maintenance;

(3) Promote drainage and minimize erosion;

(4) Accommodate settling and subsidence; and

(5) Have a permeability less than or equal to the permeability of any bottom liner.

(b) After final closure, the owner/operator must comply with all post-closure requirements:

(l) Maintain the integrity and effectiveness of the final cover;

(2) Maintain and monitor the leak detection system;

(3) Maintain and monitor the groundwater monitoring system;

(4) Prevent run-on and run-off from damaging the final cover; and

(5) Protect and maintain surveyed benchmarks.

§265.312 Special Requirements for Ignitable or Reactive Wastes

(a) Ignitable or reactive waste must not be placed in a landfill, unless the waste is treated so that the resulting mixture is no longer ignitable or reactive, §265.17(b) is complied with, and the landfill meets all applicable LDR requirements; and

(b) Except for prohibited wastes which remain subject to treatment standards in LDR, ignitable wastes in containers may be placed in a landfill provided that the wastes are disposed of in such a way that they are protected from any material or conditions which may cause them to ignite.

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Subpart N - Landfills (continued)

§265.313 Special Requirements for Incompatible Wastes

Incompatible wastes must not be placed in the same landfill cell.

§265.314 Special Requirements for Bulk and Containerized Liquids

(b) The placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids is prohibited.

(c) Containers holding free liquids must not be placed in a landfill unless:

(l) All free-standing liquid has been removed; or

(2) The container is very small; or

(3) The container is designed to hold free liquids; or

(4) The container is a lab pack.

(d) To demonstrate the absence of free liquids, the Paint Filter Liquids Test must be used.

§265.315 Special Requirements for Containers

Unless they are very small, containers must be either:

(a) At least 90 percent full; or

(b) Crushed, shredded, or similarly reduced in volume.

§265.316 Disposal of Small Containers of Hazardous Waste in Overpack Drums

Small containers of hazardous waste in overpacked drums (lab pack) may be placed in a landfill if:

(a) The hazardous waste is packaged in non-leaking inside containers;

(b) The inside containers are overpacked in an open head DOT-specification metal shipping container;

(c) The absorbent material used is not capable of reacting dangerously with, being decomposed by, or being ignited by, the contents;

(d) Incompatible wastes are not placed in the same outside container;

(e) Reactive wastes are treated or rendered non-reactive in accordance with the provisions in this paragraph; and

(f) Disposal is undertaken in compliance with LDR requirements.

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Subpart O - Incineration

§265.341 Waste Analysis

The owner/operator must analyze any waste not previously burned to enable him to establish steady state operating conditions and to determine the type of pollutants which might be emitted. The analysis must determine:

(a) The heating value of the water;

(b) The halogen content and sulfur content in the waste; and

(c) The concentrations of lead and mercury in the waste unless the owner/operator has written, documented data that show the element is not present.

§265.345 General Operating Requirements

During start-up and shut-down of an incinerator, the owner/operator must not feed hazardous waste unless the incinerator is at steady state conditions of operation.

§265.347 Monitoring and Inspections

The owner/operator must conduct the following monitoring and inspections when incinerating hazardous waste:

(a) Existing instruments which relate to combustion and emission control must be monitored at least every 15 minutes. Appropriate adjustments or corrections must be made immediately as needed.

(b) The complete incinerator and associated equipment must be inspected for leaks, spills, fugitive emissions and proper operation of emergency equipment at least daily.

§265.351 Closure

At closure, the owner/operator must remove all hazardous waste and hazardous waste residues from the incinerator.

§265.352 Interim Status Incinerators Burning Particular Hazardous Wastes

(a) Interim status incinerators may burn the dioxin bearing wastes F020, F021, F022, F023, F024, F026, or F027, only if they receive certification and meet performance standards.

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Inspection Procedures - Subpart O, Sections 265.341 through 265.352

While inspecting an incinerator, check the following:

- Waste types, particularly dioxin-containing wastes
- Feed rates and operating conditions
- Ash handling and ultimate disposal

☞ See Appendix IV for incinerator checklist.

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Subpart P - Thermal Treatment

§265.373 General Operating Requirements

Before adding hazardous waste, the owner/operator must bring his thermal treatment process to steady state conditions.

§265.375 Waste Analysis

The owner/operator must sufficiently analyze any waste which he has not previously treated to enable him to establish steady state operating conditions. The analysis must determine:

(a) The heating value of the waste; (b) The halogen content and sulfur content in the waste; and (c) The concentrations of lead and mercury in the waste.

§265.377 Monitoring and Inspections

The owner/operator must conduct the following monitoring and inspections:

(l) Existing instruments which relate to temperature and emission control must be monitored at least every 15 minutes;

(2) The stack plume must be observed visually at least hourly for normal appearance; and

(3) The complete thermal treatment process and associated equipment must be inspected at least daily.

§265.381 Closure

At closure, the owner/operator must remove all hazardous waste and hazardous waste residue from thermal treatment process or equipment.

§265.382 Open Burning; Waste Explosives

Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives.

§265.383 Interim Status Thermal Treatment Devices Burning Particular Hazardous Wastes

Interim status thermal treatment devices may burn dioxin-bearing wastes only if they receive certification and meet performance standards.

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Inspection Procedures - Subpart P, Sections 265.373 through 265.383

While inspecting a thermal treatment unit, check the following:

- Waste types being treated
- Operating conditions
- Residue handling and ultimate disposal

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Subpart Q - Chemical, Physical and Biological Treatment

§265.400 Applicability

The following regulations apply to units which treat hazardous wastes by chemical, physical or biological methods, other than tanks, surface impoundments and land treatment. Treatment in tanks, surface impoundments and land treatment units are covered in Subparts J, K and M respectively.

§265.401 General Operating Requirements

(a) Chemical, physical, or biological treatment of hazardous waste must not generate heat, fumes, or vapors.

(b) Hazardous wastes or treatment reagents must not be placed in the treatment process or equipment if they could cause the treatment process to fail before the end of its intended life.

(c) Where hazardous waste is continuously fed into a treatment process, the process must be equipped with a means to stop this inflow.

§265.402 Waste Analysis and Trial Tests

Additional analysis is required whenever:

(l) A hazardous waste is substantially different from waste previously treated; or

(2) A substantially different process is to be used. The additional analysis consists of:

(i) Conducting waste analyses and trial treatment tests; and

(ii) Obtaining written, documented, information on similar treatment experience.

§265.403 Inspections

(a) The owner/operator of a treatment facility must inspect:

(l) Discharge control and safety equipment at least once each operating day;

(2) Data gathered from monitoring equipment at least once each operating day;

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Inspection Procedures - Subpart Q, Sections 265.400 through 265.406

While inspecting a chemical, physical or biological treatment unit, check the following:

- Waste types being treated
- Operating conditions
- Residue handling and ultimate disposal
- Whether other emissions such as gases, vapors, or mists, or any odor causing substances, are present
- Records that show whether the treatment is working

Remember: treatment in tanks, surface impoundments and land treatment units is not covered by Subpart Q. Shredders, carbon regenerators, and air strippers are among the items covered by Subpart Q.

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Subpart Q - Chemical, Physical and Biological Treatment (continued)

§265.403 Inspections (continued)

(3) The construction materials of the treatment process or equipment, at least weekly; and

(4) The construction materials of the area immediately surrounding discharge confinement structures at least weekly.

§265.404 Closure

At closure, all hazardous waste and hazardous waste residues must be removed from treatment processes or equipment.

§265.405 Special Requirements for Ignitable or Reactive Wastes

(a) Ignitable or reactive waste must not be placed in a treatment process unless the waste is treated so that the resulting mixture is no longer ignitable or reactive.

§265.406 Special Requirements for Incompatible Wastes

(a) Incompatible wastes must not be placed in the same treatment process.

(b) Hazardous waste must not be placed in unwashed treatment equipment which previously held an incompatible waste.

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Drip Pads

§265.440 Applicability

(a) The requirements of Subpart W apply to the owners/operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and/or surface water runoff to an associated system.

- Existing drip pads are those constructed before December 6, 1990, and those forwhich the owner/operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990.

- All other drip pads are new drip pads.

(c) The Subpart W drip pad requirements are not applicable to the management of infrequent and incidental drippage in storage yards provided that:

(1) The owner/operator maintains a contingency plan that describes how the owner/operator will immediately respond to the discharge of drippage in the storage yard.

§265.441 Assessment of Existing Drip Pad Integrity

(a) For each existing drip pad, as defined in §265.440(a), the owner/operator must evaluate the drip pad and maintain a written assessment certifying that it meets Subpart W standards, except for liners and leak detectors. The assessment must be certified by an independent, qualified registered professional engineer, and be updated and recertified annually.

(b) The owner/operator must develop a written plan for upgrading, repairing, or modifying the drip pad to meet the liner and leak detector requirements, and submit the plan to the Regional Administrator no later than two years before such changes will be complete. The upgrade plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with the requirements of §265.443. An independent qualified registered professional engineer must review and certify the plan.

(c) When upgrades, repairs, or modifications are complete, the owner/operator must submit to the Regional Administrator the as-built drawings for the drip pad, plus a certification by an independent, qualified registered professional engineer that the drip pad conforms to the drawings.

(d) If the drip pad is found to be leaking or unfit for use, the owner/operator must either repair it pursuant to §265.443(m) or close it pursuant to §265.445.

§265.442 Design and Installation of New Drip Pads

Owners/operators must ensure that new drip pads are designed, operated, inspected, and closed with the standards below.

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Inspection Procedures - Subpart W, Sections 265.441 through 265.445

Key Considerations:

- Does the drip pad appear to be free of cracks, gaps, corrosion, or other signs of defect?
- If a leak detector is required, is it functioning properly?
- Are run-on and run-off control systems in place? If there has been a storm recently, have the collection systems been emptied?
- Have wood drippage and accumulated precipitation been removed from the collection system so that no overflow occurs?
- Did wood remain over the drip pad until drippage had ceased? Examine the storage area for wood which is no longer over the drip pad. Infrequent and incidental drippage may still occur due to the effects of weather, type of wood, or type of preservative. Was the contingency plan and operating log for storage yard inspections reviewed?
- Is there documentation of weekly inspections of the drip pad?
- Is there a cleaning log book? Is the cleaning of the drip pad documented?
- Does the facility have a contingent post-closure plan in case the drip pad cannot be clean-closed?
- Is the pad designed properly?
- If closed, have all wastes been removed and all equipment decontaminated?
- Subpart W gives owners/operators the option of installing either a coating and sealer which have a permeability of less than or equal to 1×10^{-7} centimeters per second <u>or</u> a liner and leak detection with leak collection system, but they are not required to install both on the same pad.
- Subpart W drip pad standards apply to drip pads used to manage preservative drippage, that meets a hazardous waste characteristic or the F032, F034, or F035 listing descriptions.

Remember:

Review the facility's files for:

- An engineer-certified written assessment documenting that the drip pad meets Subpart W standards;
- A written plan for meeting liner and leak detector and collection requirements (or check files at the Regional Office);
- Contingency plan for storage yard drippage if applicable.

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Drip Pads (continued)

§265.443 Design and Operating Requirements

(a) Drip pads must:

(1) Be constructed of non-earthen materials, excluding wood and non-structurally-supported asphalt.

(2) Be sloped to free-drain wood drippage, rain, or other solutions to a collection system.

(3) Have a curb or berm around the perimeter.

(4) Have a sealer/coating which has a permeability of equal to or less than 1×10^{-7} cm/s—for example, existing concrete pads must be sealed, coated, or covered so that the entire surface area that contacts wood drippage (or drippage plus rainwater) is contained and routed to an associated collection system. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner/operator elects to comply with §265.442(a) instead of §265.442(b).

(5) Be structurally strong and thick enough to prevent failure due to physical contact, climatic conditions, and daily operations (e.g. vehicle traffic, wood movement, etc.). Industry standards from groups such as the American Concrete Institute (ACI) or the American Society of Testing and Materials (ASTM) will generally be considered applicable.

(b) If an owner/operator elects to comply with §265.442(b) instead of §265.442(a), the drip pads must have the following liner and leak detector equipment:

(1) A synthetic liner that will prevent leakage during the active life of the unit (including the closure period). The liner must not absorb waste and must:

(i) Be constructed of material that is strong and thick enough to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), contact with the waste, climatic conditions, installation stress, and daily operation (including vehicular traffic on the drip pad);

(ii) Be placed upon a foundation or base which can support the liner and resist vertical pressure gradients from settlement, compression, or uplift; and

(iii) Cover all earth that could contact waste or leakage.

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Inspection Procedures - Subpart W, Sections 265.441 through 265.445 (continued)

- If a liner and leak detector and collection system is in place, as-built drawings for the drip pad plus an engineer's certification that the pad conforms to the drawings (or check files at the Regional Office);

- An engineer's statement that the drip pad meets the requirements of §265.441(a)through(f); and

- Notifications of discovery, and certifications of remedy, of any hazardous waste releases caused by the drip pad (or check files at the Regional Office).

Review the operating log for:

- Documentation that the pad has been cleaned in such a manner and with such frequency that accumulated residues are removed and managed in a manner that allows for weekly inspections;

- Documentation that all treated waste is held on the drip pad following treatment;

- Records of discovery of any hazardous waste release from the drip pad;

- A record of past operating and waste-handling practices, including type of preservative used;

- If a liner and leak detector system is in place, an engineer's certification of inspection of materials prior to installation; and

- Documentation for inspection and cleanup of any incidental drippage within the storage yard. Retention period for this documentation is 3 years minimum.

Also see the following applicable regulations:

260.10—Definitions
261.4(a)(9) and (b)(9)—Exclusions
261.31—Listing descriptions
261.35—Deletion of F032 listing following equipment cleaning and replacement
262.34—Accumulation time
265.190—Subpart J (sump requirements)
270.22—Permitting

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Drip Pads (continued)

§265.443 Design and Operating Requirements (continued)

(2) A leak detection system immediately above the liner. This system must:

(i) Be constructed of material which can chemically resist the waste and physically resist pressure from above; and

(ii) Be designed to detect drip pad failure or the release of hazardous waste or accumulated liquid at the earliest practicable time.

(3) A leak collection system immediately above the liner that is designed and maintained to collect leakage from the drip pad such that the leakage can be removed from below the drip pad. Records must be maintained in the operating log regarding the date, time, and quantity of any leakage collected in and removed from this system.

(c) Drip pads must be maintained free of cracks, gaps, corrosion, or other deterioration that could cause a hazardous waste release.

(d) The drip pad and collection system must be able to convey, drain, and collect liquid from drippage and precipitation.

(e) Unless enclosed as described in §265.440(b), a run-on control system must be able to prevent flow onto the drip pad during a 24-hour, 25-year storm (unless the system has enough excess capacity to handle such volume).

(f) Unless enclosed as described in §265.440(b), a run-off control system must be able to collect and control the volume of water from a 24-hour, 25-year storm.

(g) The owner/operator must obtain a statement from an independent, qualified registered professional engineer certifying that the drip pad meets the requirements of (a) through (f) above.

(h) Drippage and accumulated precipitation must be removed from the collection system as necessary to prevent overflow onto the drip pad.

(i) The drip pad surface must be appropriately cleaned (e.g. by rinsing, using detergents or other solvents, or steam cleaning) such that the pad can be inspected as frequently and in such a manner as needed. This cleaning must be documented in the facility's operating log.

(j) Operating practices must minimize personnel or equipment tracking hazardous waste or its constituents off the drip pad.

(k) After treatment, wood must remain over the drip pad until drippage has ceased. Records must be maintained to document compliance with this requirement.

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Drip Pads (continued)

§265.443 Design and Operating Requirements (continued)

(l) Collection systems and holding units for run-on and run-off control must be emptied or otherwise managed after storms.

(m) Throughout the active life of the drip pad, any conditions which cause or caused a release of hazardous waste must be remedied as follows:

(1) Upon detection of such a situation, the owner/operator must:

(i) Immediately record the discovery in the facility operating log;

(ii) Remove from service the affected portion of the drip pad;

(iii) Determine what repairs must be done, remove any leakage from below the pad, and establish a schedule for clean up and repairs;

(iv) Within 24 hours after discovery, notify the Regional Administrator and, within 10 working days, provide written notice with the description of repair and clean up steps planned.

(2) The Regional Administrator will review the information submitted, decide whether the pad must be completely or partially shut down until repairs are complete, and notify the owner/operator in writing of his decision and rationale.

(3) Upon completion of repairs and clean up, the owner/operator must submit to the Regional Administrator a certification signed by an independent, qualified registered professional engineer that the plans previously submitted have been carried out.

(n) The owner/operator must maintain in the facility operating log a record of past operating and waste-handling practices, including type of preservative used, drippage practices, and wood storage and handling practices.

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Drip Pads (continued)

§265.444 Inspections

(a) Before installation, liners and cover systems must be inspected for defects. Immediately after installation, an independent, qualified registered professional engineer must inspect liners and certify that they meet §265.443 standards. This certification must be maintained in the facility operating log.

(b) Drip pads in operation must be inspected weekly and after storms for:

(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(2) Presence of leakage in and proper functioning of the leakage detection system; and

(3) Deterioration or cracking of the drip pad surface.

§265.445 Closure

(a) At closure, the owner/operator must remove or decontaminate all contaminated waste residues, containment system components, contaminated subsoils, structures, and equipment, and manage them as hazardous waste.

(b) If it is impossible or impractical to remove all contaminated subsoils, the unit must be closed as a landfill.

(c) (1) An "existing" drip pad (defined in §265.440) that does not comply with the liner requirements of §265.443(b)(1) must:

(i) Include in the closure plan under §265.112 a plan for complying with paragraph (a) above and a contingent plan for complying with paragraph (b) above; and

(ii) Prepare a contingent post-closure plan under §265.118 in case the pad must be closed according to closure and post-closure landfill requirements of §265.310.

(2) Financial assurance cost estimates for closure and post-closure under §§265.112 and 265.144 must include the cost of complying with the contingent closure and contingent post-closure plans should the unit have to be closed as a landfill, but need not include the cost of expected closure under paragraph (a) above.

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Air Emissions from Process Vents

§265.1030 Applicability

(a) Subpart AA regulations apply to owners/operators of facilities that treat, store, or dispose of hazardous wastes (unless exempted in §265.1).

(b) Subpart AA regulations apply to process vents associated with six specific operations: distillation, fractionation, thin-film evaporation, solvent extraction or air or steam stripping. Subpart AA regulations apply only to vents associated with units which are 1) subject to permitting and 2) hazardous waste recycling units (which may be otherwise exempt) which are located at facilities subject to permitting.

Substantive requirements apply only if the units manage hazardous wastes with an organic concentration of 10 ppmw or greater (calculated on an annual average basis). Units managing hazardous waste below the 10 ppmw concentration require only demonstration to that effect per §265.1034(d) and (e) and recordkeeping per §265.1035(f).

§265.1032 Standards: Process Vents

(a) The owner/operator of a facility with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction or air or steam stripping operations managing hazardous wastes with organic concentrations of at least 10 ppmw shall either:

(1) For all affected process vents, reduce total organic emissions below 1.4 kg/h (3 lb/h) AND 2.8 Mg/yr (3.1 tons/yr); or

(2) For all affected process vents, reduce, using a control device, total organic emissions by 95 weight percent.

(b) If a closed-vent system and control device is used to reduce emissions, it must meet the standards of §265.1033.

(c) Determinations of vent emissions/reductions by add-on devices may be based on engineering calculations or performance tests. Performance tests must conform with §265.1034(c).

(d) Disputes between the owner/operator and the Regional Administrator regarding emissions levels will be resolved by the methods specified in §265.1034(c).

§265.1033 Standards: Closed-Vent Systems and Control Devices

(a) (1) Owners/operators of closed-vent systems and control devices used to control organic emissions shall comply with the requirements of this section.

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Inspection Procedures - Subpart AA, Sections 265.1030 through 265.1033

Ask for a list of all affected process vents which are subject to permitting (that is, units with vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations of at least 10 ppmw).

Note: Recycling units exempt from TSDF standards under §261.6(c) but located at TSDFs may be subject to Subpart AA standards.

Records should indicate which units have control devices to reduce organic emissions and which already meet the §265.1032 standards. For each unit noted as having a control device, check for the presence and operation of the device specified.

An owner/operator choosing to use a closed-vent system or control device—but who has not installed such a device by the date a unit with excessive emissions comes under Subpart AA—should be following an implementation schedule. Determine to what extent such a schedule has been followed. The units must be in compliance no later than 18 months after the date they become subject to Subpart AA.

Several types of control devices may be used. The following questions should be asked:

- Does every enclosed combustion device (such as a vapor incinerator, boiler, or process heater) that is used to reduce emissions comply with §265.1033(c)?
- Does every boiler or process heater used to reduce emissions introduce the vent stream into the flame combustion zone?
- Does any flare have visible emissions? Do all flares have a flame present? Do all flares meet §265.1033(d)(3) through (6)?
- Is a flow indicator attached to each vent? Does each indicator record vent flow stream at least hourly?
- Is any carbon in adsorption systems subject to §265.1033(g) or (h) overdue for replacement?
- Has all spent carbon that has been removed from the adsorption system been managed in accordance with §265.1033(1)?

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Air Emissions from Process Vents (continued)

§265.1033 Standards: Closed-Vent Systems and Control Devices (continued)

(2) The owner/operator of an existing facility who cannot have a closed-vent system and control device on line by the deadline date for that unit must prepare an implementation schedule for when it will be installed and operating. Controls must be installed as soon as possible, but the implementation schedule may allow up to 18 months after the effective date. All units beginning operation after December 21, 1990 should comply with closed-vent standards immediately.

(b) Vapor recovery control devices (e.g., condensers or adsorbers) must be at least 95 weight percent efficient unless the limits in §265.1032(a)(1) can be met at a lower efficiency.

(c) Enclosed combustion devices (e.g., vapor incinerators, boilers, or process heaters) must be designed or operated to either:

- Reduce organic emissions vented by 95 weight percent or greater;
- Reduce organic compound concentration to 20 ppmv (as the sum of actual compounds, not carbon equivalents) on a dry basis corrected to 3 percent oxygen; or
- Provide a minimum residence time of 0.50 seconds at a minimum temperature of 760°C.
- If a boiler or process heater is used as the control device, the vent stream must be introduced into the flame combustion zone.

(d) & (e) Flares shall have no visible emissions, as determined by methods set forth in (e)(1), except for periods of up to five minutes during any 2 consecutive hours. Flares shall be designed and operated according to the specifications in this paragraph.

(f) The owner/operator must monitor and inspect each required control device by doing the following:

(1) Installing and operating a flow indicator that records vent stream flow from each process venting at least hourly. The sensor should be in the vent stream at the nearest feasible point to the control device inlet, but before being combined with other vent streams; and

(2) Installing and operating devices to continuously monitor control equipment as specified in this section.

(g) An owner/operator using carbon adsorption systems, such as fixed-bed carbon adsorbers that <u>regenerate</u> the carbon bed directly in the control devices, must replace the existing carbon at a regular, pre-determined time interval no longer than the time set forth in §265.1035(b)(4)(iii)(F).

(h) An owner/operator using carbon adsorption systems, such as a carbon canister, that <u>does not regenerate</u> the carbon bed directly in the control device must replace the carbon on a regular basis using one of the following procedures:

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Air Emissions from Process Vents (continued)

§265.1033 Standards: Closed-Vent Systems and Control Devices (continued)

(1) Vent stream monitoring, daily or within 20% of established carbon working capacity life, or

(2) Replacement within the time specified in §265.1035(b)(4)(iii)(G).

(i) An owner/operator using control devices other than thermal vapor incinerators, catalytic vapor incinerators, flares, boilers, process heaters, condensers, or carbon adsorption systems must develop documentation describing the device and parameters to indicate proper use and maintenance.

(j) (1) Closed-vent systems must have no detectable emissions, meaning less than 500 ppm above background and none by visual inspection as determined by §265.1034(b).

(2) Closed-vent systems must be monitored to verify compliance annually and when requested by the Regional Administrator, and before the facility becomes subject to these standards. After the initial leak detection monitoring, an owner/operator is not required to monitor any closed-vent system components that continuously operate in a vacuum service or any closed-vent system joints, or other connections that are permanently or semi-permanently sealed.

(3) Detectable emissions, as defined in (j)(1) above, shall be controlled as soon as practicable, but not later than 15 calendar days after detection.

(4) A first attempt at repair must be made no later than 5 days after detection.

(k) Closed-vent systems and control devices must be operated any time emissions may be vented to them.

(l) An owner/operator using a carbon adsorption system as a closed device must manage <u>all</u> spent carbon removed from the system in one of the following manners:

(1) Regenerated or reactivated in a thermal treatment unit that is permitted under 40 CFR Part 254 Subpart X or 40 CFR Part 265 Subpart P;

(2) Burned in an incinerator that is permitted under 40 CFR Part 264 Subpart O; or

(3) Burned in a boiler or industrial furnace that is permitted under 40 CFR Part 266 Subpart H.

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Air Emissions from Process Vents: Recordkeeping

§265.1035 Recordkeeping Requirements

(a) (1) Owners/operators must keep records as specified below.

(2) Those owners/operators with multiple units subject to air emissions standards may use one system to track all records as long as units are specifically identified in each record.

(b) The following must be recorded in the facility's operating record:

(1) For those who do not have controls on-line by the deadline date per §265.1033(a)(2), an implementation schedule including a rationale as to why control requirements could not be met on time.

(2) Up-to-date documentation of compliance with vent standards in §265.1032 including:

(i) Identification of all affected vents, their annual throughput and operating hours, and estimated emission rates; and
(ii) Information and data supporting emissions compliance.

(3) For owners/operators who use test data to demonstrate emissions compliance, a performance test plan including:

(i) A test strategy for when the unit is at maximum capacity;
(ii) A detailed engineering description of the system with specifications; and
(iii) A detailed description of sampling and monitoring procedures.

(4) Compliance documentation must include the following:

(i) A list of all sources used in preparing documentation;
(ii) Records including dates of compliance tests under §265.1033(j);
(iii) For those using engineering calculations, a design analysis, drawings, etc. for control devices based on specific acceptable engineering practices;
(iv) A statement signed and dated by the owner/operator that the parameters used in the analysis reasonably represent the unit's conditions at maximum capacity,
(v) A statement signed and dated by the owner/operator or the control device manufacturer that the system is designed to achieve required emissions levels; and
(vi) For those using performance tests, all test results.

(c) Specific design documentation and operational information for each system must be kept up to date in the facility operating record, including:

(1) Description and date of modifications;

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Inspection Procedures - Subpart AA, Section 265.1035

Key Considerations:

- If a closed-vent system or control device is scheduled to be used for compliance but has not yet been installed, is an implementation schedule in the facility operating record?

- Does the operating record include up-to-date documentation of compliance with vent standards in §265.1032? Does the documentation include sources used, test/analysis records, engineering information, and owner/operator statements as specified by §265.1035(b)(4)?

- For owners/operators who use test data to demonstrate emissions compliance, is there a performance test plan in the facility operating record?

- For each system, is design documentation and operational information kept up to date in the facility operating record, including all elements listed in §265.1035(c)? Note: parts of this information need only be kept on file for 3 years.

- Check the monitoring devices to ensure that all operating parameters are met.

- If devices other than thermal vapor incinerators, catalytic vapor incinerators, flares, boilers, process heaters, condensers, or carbon adsorption systems are used, check the facility operating record for monitoring and inspection information indicating proper operation and maintenance.

- Check the facility operating record for analysis or other information related to determining applicability of Subpart AA. Note that owners/operators with affected vents which do not fall under emission control standards of §265.1032 must still have up-to-date information and data to support the fact that they are not subject to standards (see §265.1035(f)).

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Air Emissions from Process Vents: Recordkeeping (continued)

§265.1035 Recordkeeping Requirements (continued)

(2) Operating parameters and monitoring device description and diagram of monitoring sensor location or locations used to comply with §265.1033(f)(1) and (f)(2);

(3) Monitoring, operating, and inspection information from §265.1033(f) through (j);

(4) Date, time, and duration of periods breaking monitored parameters in ways specified in this paragraph for each type of control device

(5) Explanation for each case described in (c)(3) above;

(6) For carbon adsorption systems with carbon replaced at specific intervals according to §265.1033(g) or (h)(2), the date when the carbon is replaced;

(7) For carbon adsorption systems with carbon replaced when monitoring indicates breakthrough according to §265.1033(h)(1), a log that records when the system is monitored, the monitoring device reading, and when the carbon is replaced; and

(8) Date of control device startup and shutdown.

(d) Records of monitoring, operating, and inspection information required by (c)(3) through (8) above need only be kept 3 years.

(e) For control devices other than those specified in this paragraph, documentation of proper operation and maintenance.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to these air emissions standards.

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Air Emissions for Equipment Leaks: Pumps

§265.1050 Applicability

(a) Subpart BB regulations apply to owners/operators of facilities that treat, store, or dispose of hazardous wastes (unless exempted in §265.1).

(b) Subpart BB regulations apply to equipment, regardless of process, as defined by §264.1031. Subpart BB regulations apply only to equipment containing or contacted hazardous wastes managed in units which are 1) subject to permitting and 2) recycling units (which may be otherwise exempt) which are located at facilities subject to permitting.

Substantive requirements apply only if the units manage hazardous wastes with an organic concentration of 10 percent by weight or greater (not an average calculation). Units managing hazardous waste below the 10 percent concentration require only recordkeeping to that effect per §265.1064(k).

(c) Each piece of equipment with greater than ten percent organics by weight must be marked to be readily distinguishable from other equipment.

(d) Equipment in vacuum service, if identified as required in §265.1064(g)(5), is excluded from the requirements of §265.1052 to §265.1060.

§265.1052 Pumps in Light Liquid Service

(a) Monitoring and inspections:

(1) Each pump in light liquid service must be monitored monthly for leaks by Method 21 as specified in §265.1063(b), except as provided in (d), (e), or (f) below.

(2) Weekly visual inspections must be made for leaks from the pump seal.

(b) Leaks:

(1) An instrument reading over 10,000 ppm constitutes a leak.

(2) Indications of dripping from the pump seal constitutes a leak.

(c) Repairs:

(1) Leaks must be repaired as soon as practicable, but not later than 15 calendar days after detection, unless a delay of repair is allowed under §265.1059.

(2) A first attempt at repair must be made no later than 5 calendar days after detection.

(d) Pumps equipped with dual mechanical seal systems which include a barrier fluid system are exempt from (a) above provided that:

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Inspection Procedures - Subpart BB, Sections 265.1050 and 265.1052

Ask for a list of all equipment which is subject to permitting and contains or contacts hazardous wastes with organic concentrations of at least 10 percent or 100,000 ppmw. Note: recycling units that are located at TSDFs which are exempt from TSDF standards under §261.6(c) may still be subject to Subpart BB standards. Check each piece of equipment on the list for a marking which readily distinguishes it from other equipment.

- Visually inspect each piece of equipment on the list. Does any piece of equipment appear to be leaking?

- For pumps required to be monitored monthly (pursuant to §265.1052(a)), ask for documentation of such monitoring. Also check for records of weekly visual inspections.

- For pumps exempt from monthly monitoring under §265.1052(d), check for a barrier fluid system with a sensor. If the sensor has an alarm, is it functioning? Has the alarm been checked weekly? If no alarm is attached, has the sensor been checked daily to be sure it is functioning?

- Identify from the facility log equipment which has leaked and been repaired previously. Be sure to inspect this equipment.

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Air Emissions for Equipment Leaks: Pumps (continued)

§265.1052 Pumps in Light Liquid Service (continued)

(1) Each dual mechanical seal system is properly equipped with barrier fluid and is operated as specified in this paragraph;

(2) The barrier fluid system is not hazardous waste with greater than 10 weight percent organics;

(3) Each barrier fluid system is equipped with a sensor to detect seal failure and/or system failure;

(4) Each pump is visually inspected each calendar week for dripping liquids;

(5) Each sensor described in (d)(3) above is checked daily or equipped with an audible alarm which is checked weekly to be sure it is functioning. The owner/operator must create a criterion that indicates failure of the seal system and/or the barrier fluid system, and

(6) Dripping liquids or a positive sensor reading indicates a leak, which must be repaired as soon as practicable but no later than 15 calendar days after detection, unless a delay of repair is allowed under §265.1059. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump designated under §265.1064(g)(2) for no detectable emissions is exempt from (a),(c),and(d) above if the pump:

(1) Has no externally actuated shaft penetrating the pump housing;

(2) Operates with no detectable emissions as defined in this paragraph; and

(3) Is tested for compliance with (e)(2) above initially, annually, and when requested by the Regional Administrator.

(f) Any pump with a closed-vent system which captures and transports any leakage from the seal(s) to a control device per §265.1060 is exempt from (a) through (e) above.

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Air Emissions for Equipment Leaks: Standards

§265.1053 Standards: Compressors

(a) Compressors must have a seal system that includes a barrier fluid system and prevents organic emissions, unless excepted from this requirement pursuant to (h) and (i) below.

(b) Compressor seal systems must:

(1) Be operated with the barrier fluid at a pressure that is always greater than the compressor stuffing box pressure; or

(2) Have a barrier fluid system that is connected by a closed-vent system to a control device that complies with §265.1060; or

(3) Purge the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

(c) The barrier fluid must not be a hazardous waste with organic concentrations 10 weight percent or greater.

(d) Barrier fluid systems described in (a) through (c) above must have a sensor that detects seal and/or barrier fluid system failure.

(e) (1) Each sensor used to meet the requirement of (d) above must be checked daily or have an audible alarm which is checked monthly to be sure it is functioning. Sensors at unmanned sites must be checked daily.

(2) The owner/operator must create a criterion that indicates failure of the seal system and/or the barrier fluid system.

(f) Failure of the seal system or the barrier fluid system, according to the criterion set forth in (e)(2) above, constitutes a leak.

(g) (1) Leaks must be repaired as soon as practicable but no later than 15 calendar days after detection, unless allowed under §265.1059.

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Inspection Procedures - Subpart BB, Sections 265.1053 through 265.1062

- Compressors required to have a seal system (pursuant to §265.1053(a)) should be inspected for a working barrier fluid system. Check for a working sensor. If the sensor has an alarm, is it functioning? Has the alarm been checked monthly? If no alarm is attached, has the sensor been checked daily? If the sensor, with or without an alarm, is at an unmanned site, has it been checked daily?

- With respect to pressure relief devices in gas/vapor service under §265.1054, unless exempted under §265.1054(c), were measurements taken after each release to ensure that emissions returned below 500 ppm within 5 days?

- Unless in situ, check sampling connection systems to see if a purged hazardous waste stream would be sent directly to a recycling or disposal system with no detectable emissions.

- Check all open-ended valves for a cap, blind flange, plug, or second valve, unless an operation is underway requiring a flow through the valve.

- Have all valves subject to §265.1057(a) been monitored according to the relevant schedule for each valve (specified in §265.1057(c) as depending on its track record)?

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Air Emissions for Equipment Leaks: Standards (continued)

§265.1053 Standards: Compressors (continued)

(2) A first attempt at repair of leaks must be made within 5 calendar days of detection.

(h) Compressors are exempt from the requirements of (a) and (b) above if equipped with a closed-vent system which sends leakage to a control device that meets standards of §265.1060, unless excepted under paragraph (i) below.

(i) Compressors designated under §265.1064(g)(2) for no detectable emissions are exempt from the requirements of (a) through (h) above if:

(i)(1) A reading indicates emissions less than 500 ppm above background; and

(i)(2) They are tested for compliance with (i)(1) above initially, annually, and when requested by the Regional Administrator.

§265.1054 Standards: Pressure Relief Devices in Gas/Vapor Service

(a) Except during pressure releases (see (b)(1) below), pressure relief devices must not have emissions exceeding 500 ppm above background, as measured by §265.1063(c).

(b) After pressure release:

(1) Emissions must be returned below 500 ppm above background as soon as practicable, but no later than 5 calendar days after the release, unless excepted in §265.1059.

(2) The pressure relief device must be monitored within 5 calendar days of release to confirm emissions levels, as measured by the method specified in §265.1063(c).

(c) Pressure relief devices with a closed-vent system sending leakage to a control device that meets standards of §265.1060 are exempt from the requirements of (a) and (b) above.

§265.1055 Standards: Sampling Connecting Systems

(a) Sampling connection systems must have a closed-purge or closed-vent system.

(b) Closed-purge and closed-vent systems required in (a) above must:

(1) Return the purged hazardous waste stream directly to the hazardous waste management process line with no detectable emissions; or

(2) Collect and recycle the purged hazardous waste stream with no detectable emissions; or

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Air Emissions for Equipment Leaks: Standards (continued)

§265.1055 Standards: Sampling Connecting Systems (continued)

(3) Capture and send all purged hazardous waste to a control device that complies with §265.1060.

(c) In situ sampling systems are exempt from the requirements of (a) and (b) above.

§265.1056 Standards: Open-ended Valves or Lines

(a) Open-ended valves or lines must have a cap, blind flange, plug, or second valve which seals the open end, except during operations requiring flow through the open-ended valve or line.

(b) If a second valve is used, the valve closer to the waste stream must be closed first.

(c) When a double block and bleed system is used, the bleed valve or line may remain open during operations that require venting the line between block valves, but must comply with the requirements of (a) above.

§265.1057 Standards: Valves in Gas/Vapor or Light Liquid Service

(a) Valves in gas/vapor or light liquid service must be monitored monthly to detect leaks pursuant to §265.1063(b) and must comply with the requirements of (b) through (e) below unless excepted by (f), (g), or (h) below, §265.1061, or §265.1062.

(b) An instrument reading of over 10,000 ppm constitutes a leak.

(c) (1) If a leak is not detected for two successive months, the valve need only be monitored the first month of every quarter, beginning with the next quarter.

(2) If a leak is detected, the valve must be monitored monthly until it again does not leak for two successive months.

(d) (1) Leaks must be repaired as soon as practicable, but not later than 15 calendar days after detection, unless a longer period is allowed under §265.1059.

(2) A first attempt at repair of leaks must be made within 5 calendar days of detection.

(e) First attempts at repair include such actions as tightening or replacing bonnet bolts, tightening packing gland nuts, and injecting lubricant into lubricated packing.

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Air Emissions for Equipment Leaks: Standards (continued)

§265.1057 Standards: Valves in Gas/Vapor or Light Liquid Service (continued)

(f) Valves designated under §265.1064(g)(2) for no detectable emissions are exempt from the requirements of (a) above if they:

(1) Have no external actuating mechanism in contact with the hazardous waste stream;

(2) Emit less than 500 ppm above background, as determined by the method specified in §265.1064(g)(2); and

(3) Are tested for compliance with (f)(2) above initially, annually, and when requested by the Regional Administrator.

(g) Valves designated under §265.1064(h)(1) as unsafe-to-monitor are exempt from the requirements of (a) above if:

(1) The owner/operator determines that monitoring personnel would be exposed to an immediate danger; and

(2) The owner/operator adheres to a written plan requiring monitoring as frequently as practicable during safe-to-monitor times.

(h) Valves designated under §265.1064(h)(2) as difficult-to-monitor are exempt from the requirements of (a) above if:

(1) The owner/operator determines that monitoring personnel would have to be elevated more than 2 meters above the support surface;

(2) The unit to which the valves are connected was in operation before June 21, 1990; and

(3) The owner/operator adheres to a written plan requiring monitoring at least yearly.

§265.1058 Standards: Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors

(a) The devices must be monitored within 5 days of finding a potential leak by sight, sound, smell, or other method.

(b) An instrument reading 10,000 ppm or greater constitutes a leak.

(1) Leaks must be repaired as soon as practicable, but not later than 15 calendar days after detection, unless a longer period is allowed under §265.1059.

(2) A first attempt at repair of leaks must be made within 5 calendar days of detection.

(d) Repair attempts include the methods set forth in §265.1057(e).

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Air Emissions for Equipment Leaks: Standards (continued)

§265.1059 Standards: Delay of Repair

(a) Delay of repair is allowed if the repair is infeasible without shutting down the hazardous waste management unit. If so, the leak must be repaired during the next shutdown.

(b) Delay of repair is allowed if the equipment is isolated from the HWMU and if it ceases to contain or contact hazardous waste with organic concentrations at least 10 percent by weight.

(c) Delay of repair for valves is allowed if:

(1) The owner/operator determines that emission of purged material resulting from immediate repair is greater than the emissions likely to result from delay of repair;

(2) During repair, the purged material is collected and destroyed or recovered in a control device pursuant to §265.1060.

(d) Delay of repair for pumps is allowed if:

(1) A dual mechanical seal system with a barrier fluid system would have to be used;

(2) Repair is completed as soon as practicable, but at least within 6 months of leak detection.

(e) Delay of repair beyond a HWMU shutdown is allowed for a valve if valve assembly replacement must be done during the shutdown and an adequate supply of valves runs out. Delay beyond the next shutdown will only be allowed if it occurs within 6 months of the first shutdown.

§265.1060 Standards: Closed-vent Systems and Control Devices

Owners/operators of closed-vent systems and control devices must comply with the requirements of §265.1033.

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Air Emissions for Equipment Leaks: Alternative Standards

§265.1061 Alternative Standards for Valves in Gas/Vapor Service or Light Liquid Service: Percentage of Valves Allowed to Leak

(a) Those subject to §265.1057 may choose to be regulated under an alternative standard which allows 2 percent of the valves to leak.

(b) To follow this standard, the Regional Administrator must be notified, performance tests pursuant to (c) below must be done initially, annually, and as requested, and leaks must be repaired pursuant to §265.1057(d) and (e).

(c) Performance tests must be done as follows:

(1) Valves subject to §265.1057 within the HWMU must be monitored within 1 week by methods specified in §265.1063(b).

(2) An instrument reading over 10,000 ppm constitutes a leak.

(3) The leak percentage is calculated by dividing the number of leaking valves subject to §265.1057 by the total number of valves subject to §265.1057.

(d) If an owner/operator chooses to no longer comply with this section, the Regional Administrator must be notified.

§265.1062 Alternative Standards for Valves in Gas/Vapor Service or Light Liquid Service: Skip Period Leak Detection and Repair

(a) Owners/operators subject to §265.1057 may choose to skip leak detection periods as specified in (b)(2) and (3) below and, if they so choose, must notify the Regional Administrator.

(b) (1) §265.1057 must be complied with except as provided in (b)(2) and (3) below.

(2) After two consecutive quarterly detection periods, if the 2 percent leak rate is not exceeded, every other quarter may be skipped.

(3) After five consecutive quarterly detection periods, if the 2 percent leak rate is not exceeded, three quarters may be skipped.

(4) If the 2 percent leak rate is exceeded, monthly monitoring must be done pursuant to §265.1057 until compliance with §265.1057(c)(1) is achieved.

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Air Emissions for Equipment Leaks: Recordkeeping

§265.1064 Recordkeeping Requirements

(a) Records must be kept for Subpart BB units. One system to track all records may be used as long as units are specifically identified in each record.

(b) The following must be recorded in the facility's operating record:

(1) For each piece of equipment, the equipment ID number and HWMU identification, approximate location, type of equipment, weight percent of organics in the waste stream, the physical state of the material (e.g., gas, vapor, liquid), and the compliance method used;

(2) For those who do not have controls on-line by the deadline date set under §265.1033(a)(2), an implementation schedule including a rationale why control requirements could not be met on time;

(3) For those who use test data to demonstrate emissions compliance of the control device, a performance test plan pursuant to §265.1060; and

(4) Documentation of compliance with §265.1060 including that which is specified in §265.1035(b)(4).

(c) When a leak is detected, the owner/operator must:

(1) Attach to the leaking equipment a weatherproof and readily visible identification, including the equipment number, the date evidence of potential leak was discovered, and the leak detection date;

(2) Except for leaking valves, the identification may be removed from equipment after repair.

(3) The identification may be removed from a valve after it has been monitored for 2 months and no leak is detected.

(d) When each leak is detected, as specified in §§265.1052, 265.1053, 265.1057, and 265.1058, the following information must be recorded in an inspection log that is kept in the facility operating record:

(1) The instrument, operator, and equipment identification numbers;

(2) The date evidence of a potential leak was found pursuant to §265.1058(a);

(3) The leak detection date and dates of attempts to repair the leak;

(4) Repair methods applied in each attempt;

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Inspection Procedures - Subpart BB, Section 265.1064

- Check the facility operating record. Does it contain:

  -- A list of each piece of equipment, including all details required by §265.1064(b)(1)?
  -- An implementation schedule for equipment scheduled to have control devices installed, including a rationale for not having controls in place by the date they become subject to Subpart BB?
  -- A performance test plan (if test data is used to demonstrate compliance with emissions standards)?

- Review the facility operating record for an inspection log with records of equipment leaks. For each leak, check the following:

  -- If repair is not yet complete, check the equipment for identification (such as a tag) pursuant to §265.1064(c)(1).
  -- If repair was completed within the past two months and the equipment leaking was a valve, identification as mentioned above should still be on the equipment. If repair was completed more than two months ago and the identification has been removed, ask to see monitoring results indicating no leak has occurred for two months.
  -- Check the information of each leak record against the list of requirements listed in §265.1064(d). Note: these records need only be kept for 3 years.

- If a closed-vent system or control device is used to control emissions from leaking equipment, examine the facility operating record for design documentation and monitoring, operating, and inspection information for each such system. Note: operation information need only be kept for three years.

- If an owner/operator chooses to use a device other than those with specific Subpart BB standards, check the facility operating log for documentation of proper operation and maintenance.

- Examine the operating record for a log of all equipment subject to Subpart BB. Check for each piece of information required by §265.1064(g).

- Examine the operating record for lists of all "unsafe-to-monitor" and "difficult-to-monitor" valves. There should be an explanation of why each valve was so designated and a plan for monitoring each valve.

- If the owner/operator has chosen the alternative valve standard under §265.1062 (2% or fewer leaking), check the operating record for the percentage of valves found leaking during several monitoring periods.

- Check the facility operating record for all analysis or other information related to determining applicability of equipment leak standards. Note that owners/operators with equipment meeting the applicability criteria §265.1050 which does not fall under emission control standards of Subpart BB must still have up-to-date information and data in the facility operating record to support the fact that the equipment is not subject to standards.

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Air Emissions for Equipment Leaks: Recordkeeping (continued)

§265.1064 Recordkeeping Requirements (continued)

(5) The words "Above 10,000" if the maximum instrument reading measured by the methods in §265.1063(b) is equal to or greater than 10,000 ppm;

(6) The words "Repair delayed" and the reason for delay if a leak is not repaired within 15 calendar days of discovery of the leak;

(7) Documentation supporting the delay of repair of a valve, in compliance with §265.1059(c);

(8) If delayed until shutdown, the signature of the owner/operator (or designate) who decided the repair had to wait until shutdown;

(9) The expected date of successful repair if the leak was not repaired within 15 days; and

(10) The date of successful repair.

(e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device subject to §265.1060 must be recorded and kept up-to-date in the facility operating record pursuant to §265.1035(c).

(f) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, monitoring and inspection information indicating proper operation and maintenance of the control device must be recorded in the facility operating log.

(g) The following information for equipment subject to §§265.1052 through 265.1060 must be recorded in a log that is kept in the facility operating record:

(1) A list of identification numbers for equipment (except welded fittings) subject to Subpart BB;

(2) A list of identification numbers for equipment designated for <u>no detectable emissions.</u> The designation must be signed by the owner/operator;

(3) A list of equipment identification numbers for <u>pressure relief devices</u> subject to §265.1054(a);

(4) The dates, background level measured, and maximum instrument reading measured for each compliance test required; and

(5) A list of identification numbers for equipment in <u>vacuum service</u>.

(h) The following information for valves subject to §265.1057(g) and (h) must be recorded in a log that is kept in the facility operating record:

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Air Emissions for Equipment Leaks: Recordkeeping (continued)

§265.1064 Recordkeeping Requirements (continued)

(h) (1) A list of identification numbers for valves that are designated as unsafe-to-monitor with an explanation of why this is so and a plan to monitor each valve;

(2) A list of identification numbers for valves that are designated as difficult-to-monitor with an explanation of why this is so and a planned schedule to monitor each valve.

(i) For valves complying with §265.1062, the monitoring schedule and the percent of valves found leaking during each monitoring period must be maintained in the facility operating record.

(j) The criteria required under §265.1052(d)(5)(ii) and §265.1053(e)(2), along with an explanation, a list of changes, and reasons for changes, must be recorded in a log that is kept in the facility operating record.

(k) The following information must be recorded in a log that is kept in the facility operating record for use in determining exemptions as provided in the applicability section of Subpart BB and other specific subparts:

(1) An analysis determining the design capacity of the HWMU;

(2) A statement listing the hazardous waste influent to and effluent from each HWMU subject to §265.1052 and §265.1060 and an analysis determining whether these hazardous wastes are heavy liquids; and

(3) An up-to-date analysis and the supporting information and data used to determine whether equipment is subject to §265.1052 through §265.1060. When knowledge of the waste stream is applied, the record must include documentation pursuant to §265.1063(d)(3).

(l) Records of equipment leak and operating information required under (d) and (e) above need only be kept for 3 years.

(m) Owners/operators subject to both Subpart BB and 40 CFR Part 60 Subpart VV, or 40 CFR Part 61, Subpart V, may elect to use either §265.1064 or the provisions of 40 CFR Part 60 or 61 to determine compliance with Subpart BB, to the extent that these provisions are duplicative. If the 40 CFR Part 60 or 61 records are used, they must be kept with, or made readily available with, the facility operating record.

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Air Emission Standards - Subpart CC

§265.1080 Applicability

(a) Subpart CC regulations apply to owners/operators of facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to Subparts I, J, or K of Part 265 (unless exempt under §265.1 or paragraph (b) of this section).

(b) Subpart CC does not apply to the following types of waste management units:

(1) A waste management unit that does not receive hazardous waste on or after XX/XX/199X.

(2) A container having a design capacity less than or equal to $0.1m^3$ (approximately 46 gallons).

(3) A tank that has stopped receiving hazardous waste and for which the owner/operator has begun implementing or completed closure pursuant to an approved closure plan.

(4) A surface impoundment in which an owner/operator has stopped adding hazardous waste and has begun implementing or completed closure pursuant to an approved closure plan.

(5) A waste management unit used solely to treat or store hazardous waste generated on site from remedial activities required under the RCRA corrective action, CERCLA response authorities, or any other similar Federal or State remediation authorities.

(6) A waste management unit used solely to manage radioactive mixed waste.

(c) An owner/operator of a facility that has received a final RCRA permit prior to XX/XX/199X, must meet the following requirements:

(1) The requirements of Subpart CC must be incorporated into the facility permit either when the permit is reissued pursuant to §124.15 or renewed pursuant to §270.50(d).

(2) Until the date when the permit is reissued or renewed, owners/operators must meet the requirements of this Subpart.

§265.1083 Standards: General

(a) This section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to Subpart CC.

(b) Owners/operators must control organic air emissions from each waste management unit subject to Subpart CC in accordance with standards specified in §265.1085 through §265.1088 (except as provided for in paragraph (c) of this section).

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Inspection Procedures - Subpart CC, Sections 265.1080 through 265.1089

Ask for a list of all tanks, surface impoundments, and containers that are subject to permitting at the facility.

At large quantity generator sites, ask for a list of all 90-day tanks and containers that are used to accumulate hazardous waste.

Note: Recycling units exempt from TSDF standards under §261.6(c) are not subject to Subpart CC standards.

Records should indicate which units at the facility must have air emission controls as required by Subpart CC (e.g., a cover venting air emissions through a closed-vent system to a control device). For each unit noted as having air emission controls, check for the presence and operation of the equipment specified.

- Are there any noticeable tears, holes, or gaps in the covers that indicate a leak in the air emission control equipment?

  Note: It is important to remember that unless specifically exempt in §264.1 or §265.1080(b), Subpart CC applies to all tanks, surface impoundments, and containers, regardless of the organic content of the waste managed in the unit; however, units managing hazardous waste with an average volatile organic concentration less than 100 ppmw are not required to install the required controls. Thus, owners/ operators with affected vents which do not fall under emission control standards of §265.1085 through §265.1088 must still have up to date information and data to support the fact that they are not subject to standards (see §265.1090(d)). For example, an owner/operator electing not to use air emission controls for a particular tank, surface impoundment, or container subject to the Subpart CC must record all information used to support this decision in the facility's operating log.

An owner/operator required to install air emission controls as specified in Subpart CC, but who has not installed such controls by the date upon which the a unit becomes subject to the standards, should be following an implementation schedule. Determine to what extent such a schedule has been followed. Units must be in compliance with the standards no later than 30 months after the date the facility becomes subject to Subpart CC.

Several types of control devices may be used. The following questions should be asked:

- Does every enclosed combustion device (such as a vapor incinerator, boiler, or process heater) that is used to reduce emissions comply with §265.1033(c)?

- Does every boiler or process heater used to reduce air emissions introduce the vent stream into the flame combustion zone?

- Does any flare have visible emissions? Do all flares have a flame present? Do all flares meet §265.1033(d)(3) through (6)?

- Is a flow indicator attached to each vent? Does each indicator record vent flow stream at least hourly?

- Is any carbon in adsorption systems subject to §265.1033(g) or (h) overdue for replacement?

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- Has all spent carbon that has been removed from the adsorption system been managed in accordance with §265.1033(l)?

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Air Emission Standards - Subpart CC (continued)

§265.1083 Standards: General (continued)

(c) A waste management unit is exempted from the unit-specific standards of §265.1085 through §265.1088 if all hazardous waste placed in the unit meets either of the following conditions:

(1) The average volatile organic (VO) concentration of the hazardous waste at the point of origination is less than 100 parts per million by weight (ppmw). Procedures for determining average VO concentration are found in §265.265.1084(a).

(2) The organic content of the hazardous waste has been reduced by an organic destruction or removal process that achieves the specific conditions described in paragraphs (i) through (vii) of this section:

(d) Each material removed from one of the processes discussed in paragraphs (c)(2)(i) through (c)(2)(v) of this section that is not a hazardous waste but has an average VO concentration equal to or greater than 100 ppmw must be managed in a waste management unit in accordance with the unit-specific standards in paragraph (b) of this section.

(e) The Regional Administrator may at any time perform, or request that the owner/operator perform, a waste determination for any hazardous waste that is managed in a tank, surface impoundment, or container exempted from using the required air emission controls. Such waste determinations must be in accordance with the specific requirements of this section.

§265.1085 Standards: Tanks

(a) This section applies to owners/operators of tanks subject to Subpart CC into which any hazardous waste is placed except for the following tanks:

(1) A tank managing hazardous waste that <u>has been treated</u> by one of the organic reduction or removal processes specified in §265.1083(c); or

(2) Tanks used for the biological treatment of hazardous waste in accordance with the requirements of §265.1083(c)(2)(iv).

(b) The owner/operator must place the hazardous waste into one the following types of tanks:

(1) A tank equipped with a cover (e.g., a fixed roof) that is vented through a closed-vent system to a control device. Specific requirements for covers, closed-vent systems, and control devices are found in paragraph (d) of this section;

(2) A tank equipped with a fixed roof and an internal floating roof in accordance with the requirements of §265.1091;

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Air Emission Standards - Subpart CC (continued)

§265.1085 Standards: Tanks (continued)

(3) A tank equipped with an external floating roof in accordance with the requirements of §265.1091; or

(4) A pressure tank designed to operate as a closed system with no detectable organic emissions at all times hazardous waste is in the tank, except as provided for in paragraph (g) of this section.

(c) As an alternative to the tank standards, an owner/operator may place hazardous waste in a tank equipped only with a cover (e.g., fixed roof) if the hazardous waste in the tank meets all of the following conditions:

(1) The hazardous waste is neither mixed, stirred, agitated, nor circulated within the tank using a process that results in splashing, frothing, or visible turbulent flow on the waste surface during normal process operations;

(2) The hazardous waste in the tank is not heated, except where necessary to prevent the waste from freezing or to maintain normal waste flow conditions;

(3) The hazardous waste in the tank is not treated using a waste stabilization process or any other process that produces an exothermic reaction; and

(4) The maximum organic vapor pressure of the hazardous waste in the tank does not exceed the levels specified in this paragraph, depending on the design capacity of the tank. Organic vapor pressure may be determined by using the procedures in §265.1084(c).

(d) To comply with paragraph (b)(1) of this section, the owner/operator must design install, and maintain a cover that vents organic vapors through a closed-vent system to a control device.

(1) The cover must be designed and operated to meet the following requirements:

(i) The cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) must be designed to operate with no detectable organic emissions when all openings are in a closed, sealed position.

(ii) Each cover opening must be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) at all times hazardous waste is in the tank except as provided for in paragraph (f) of this section.

(2) The closed-vent system and control device must be designed and operated in accordance with the requirements of §265.1088.

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Air Emission Standards - Subpart CC (continued)

§265.1085 Standards: Tanks (continued)

(e) The owner/operator must install, operate, and maintain enclosed pipes or other closed systems to transfer hazardous waste in the following manner:

(1) Transfer all hazardous waste to the tank from another tank, surface impoundment, or container subject to Subpart CC; and

(2) Transfer all hazardous waste from the tank to another tank, surface impoundment, or container subject to Subpart CC.

(f) Each cover opening must be secured in a closed, sealed position (e.g., covered by a gasketed lid) at all times hazardous waste is in the tank except when it is necessary to conduct one of the following activities:

(1) Add, remove, inspect, or sample material in the tank;

(2) Inspect, maintain, repair, or replace equipment located inside the tank; or

(3) Vent gases or vapors from the tank to a closed-vent system that is connected to a control device. All closed-vent systems and control devices must meet the standards of §265.1088.

(g) One or more safety devices which vent directly to the atmosphere may be used on the tank, closed-vent system, or control device provided the following conditions are met:

(1) The safety device is not used for planned or routine venting of organic vapors; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that it be open in order to prevent physical damage to the tank, closed-vent system, or control device. An example of an unplanned event is a sudden power outage.

§265.1086 Standards: Surface Impoundments

(a) This section applies to owners and operators of surface impoundments subject to Subpart CC into which any hazardous waste is placed, except for the following surface impoundments:

(1) A surface impoundment managing hazardous waste that has been treated by one of the organic reduction or removal processes specified in §265.1083(c); or

(2) A surface impoundment used for the biological treatment of hazardous waste in accordance with the requirements of §265.1083(c)(2)(iv).

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Air Emission Standards - Subpart CC (continued)

§265.1086 Standards: Surface Impoundments (continued)

(b) The owner/operator must place the hazardous waste into a surface impoundment equipped with a cover (e.g., an air-supported structure or rigid cover) that is vented through a closed-vent system to a control device. The cover must meet the requirements specified in paragraph (d) of this section.

(c) As an alternative to paragraph (b), an owner/operator may place hazardous waste into a surface impoundment equipped with a floating membrane cover that meets the requirements of paragraph (e) of this section, provided the hazardous waste being placed into the unit meets the following conditions:

(1) The hazardous waste is neither mixed, stirred, agitated, nor circulated within the surface impoundment using a process that results in the splashing, frothing, or visible turbulent flow on the waste surface during normal operations;

(2) The hazardous waste in the surface impoundment is not heated; and

(3) The hazardous waste in the surface impoundment is not treated using a waste stabilization process or a process that produces an exothermic reaction.

(d) To comply with paragraph (b)(1) of this section, the owner/operator must design, install, operate, and maintain a cover on the surface impoundment that will vent organic vapors through a closed-vent system to a control device.

(1) The cover must be designed and operated to meet the following requirements:

(i) The cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) must be designed to operate with no detectable organic emissions when all openings are in a closed, sealed position.

(ii) Each cover opening must be secured in a closed, sealed position at all times hazardous waste is in the surface impoundment except as provided for in paragraph (g) of this section.

(e) Floating membrane covers used to comply with the requirements of Subpart CC must meet the following requirements:

(1) Whenever hazardous waste is in the surface impoundment, the entire area of the hazardous waste must be enclosed by the cover. Air spaces underneath the cover may not be vented to the atmosphere, except in emergency situations as specified in paragraph (h) of this section;

(2) The floating membrane cover and all cover openings (e.g., access hatches, sampling ports, and gauge wells) must be designed to operate with no detectable organic emissions when all openings are in a closed, sealed position;

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Air Emission Standards - Subpart CC (continued)

§265.1086 Standards: Surface Impoundments (continued)

(3) Each cover opening must be kept in a closed, sealed position (e.g., covered by a gasketed lid or cap) at all times hazardous waste is present in the surface impoundment except as provided for in paragraphs (g)(1) through (g)(3) of this section; and

(4) The synthetic membrane material used for the floating membrane cover must be designed according to the specifications of this paragraph.

(f) The owner/operator must install, operate, and maintain enclosed pipes or other closed systems to transfer hazardous waste in the following manner:

(1) Transfer all hazardous waste <u>to</u> the surface impoundment from another tank, surface impoundment, or container subject to Subpart CC; and

(2) Transfer all hazardous waste <u>from</u> the surface impoundment to another tank, surface impoundment, or container subject to Subpart CC.

(g) Each cover opening must be kept in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever hazardous waste is in the surface impoundment except when it is necessary to :

(1) Add, remove, inspect, or sample material in the surface impoundment;

(2) Inspect, maintain, repair, or replace equipment located underneath the cover;

(3) Remove treatment residues from the surface impoundment in accordance with the requirements of §268.4; or

(4) Vent gases or vapors from the surface impoundment to a closed-vent system that is connected to a control device.

(h) One or more safety devices that vent directly to the atmosphere may be used on the cover, closed-vent system, or control device provided the following conditions are met:

(1) The safety device is not used for planned or routine venting of organic vapors; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that it be open in order to prevent physical damage to the surface impoundment, closed-vent system, or control device. An example of an unplanned event is a sudden power outage.

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Air Emission Standards - Subpart CC (continued)

§265.1087 Standards: Containers

(a) This section applies to owners/operators of containers subject to Subpart CC unless the hazardous waste being placed into the container meets the conditions specified in §265.1083(c). Containers having a design capacity greater than $0.1 m^3$ are not subject to Subpart CC.

(b) Owners/operators must manage hazardous waste in containers using the following procedures:

(1) The hazardous waste must be placed into one of the following types of containers:

(i) A container equipped with a cover that operates with no detectable organic emissions when all container openings (e.g., lids, bungs, hatches, and sampling ports) are in a closed, sealed position as determined by Method 21 in 40 CFR Part 60, Appendix A;

(ii) A container with a design capacity less than or equal to $0.46 m^3$ (approximately 119 gallons) that is equipped with a cover that complies with all Department of Transportation packaging requirements; or

(iii) A container that is attached to or forms part of any truck, trailer, or railcar, and that has been demonstrated within the preceding 12 months to be organic vapor tight when all opening are in a closed, sealed position. Owners/operators must use Method 27 in 40 CFR Part 60, Appendix A, in conjunction with a pressure measuring device to test the container for vapor tightness.

(2) Owners/operators treating hazardous waste in a container by either a waste stabilization process, a process that requires the addition of heat, or any process that produces an exothermic reaction must meet the following requirements:

(i) Whenever the container is open during the treatment process, the container must be placed inside an enclosure that is vented through a closed-vent system to a control device.

(ii) The enclosure must be designed and operated in accordance with the requirements of this section.

(iii) The closed-vent system and control device must be designed and operated in accordance with the standards of §265.1088.

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Air Emission Standards - Subpart CC (continued)

§265.1087 Standards: Containers (continued)

(3) Transfer of hazardous waste into a container having a design capacity greater than 0.46 m^3 (approximately 119 gallons) must meet the following requirements:

(i) Waste transfer by pumping must meet the submerged fill standards specified in this section.

(ii) Hazardous waste transferred by means other than pumping must be performed so that during transfer operations the cover remains in place and all container openings are maintained in a closed, sealed position (except for those openings through which hazardous waste enters the container).

(c) Container openings must remain in a closed, sealed position except when necessary to conduct the following activities:

(1) Add, remove, inspect, or sample the material in the container;

(2) Inspect, maintain, repair, or replace equipment located inside the container; or

(3) Vent gases or vapors from a cover located over or enclosing an open container to a closed-vent system connected to a control device that is designed in accordance with Subpart CC standards.

(d) One or more safety devices that vent directly to the atmosphere may be used on the container, closed-vent system, or control device provided the following conditions are met:

(1) The safety device is not used for planned or routine venting of organic vapors; and

(2) The safety device remains in a closed, sealed position at all times except when an unplanned event requires that it be open in order to prevent physical damage to the container, closed-vent system, or control device. An example of an unplanned event is a sudden power outage.

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Air Emission Standards - Subpart CC (continued)

§265.1088 Standards: Closed-Vent Systems and Control Devices

(a) This section applies to each closed-vent system and control device installed and operated to control air emissions in accordance with the Subpart CC standards.

(b) The closed-vent system must meet the following requirements:

(1) Each closed-vent system must route the gases, vapors, and fumes emitted from the hazardous waste management unit to a control device that meets the requirements of paragraph (c) of this section.

(2) Each closed-vent system must be designed and operated in accordance with the Subpart AA standards for process vents in §265.1033(j).

(3) Closed-vent systems containing one or more bypass devices that are used to divert all or a portion of the vapors from entering the control device must meet the specific requirements of this section.

(c) Control devices used to comply with Subpart CC must meet the following requirements:

(1) The control device must be one of the following devices:

(i) A control device that reduces the total organic content of the inlet vapor stream to the control device by at least 95 weight percent;
(ii) An enclosed combustion device that meets the requirements of §265.1033(c); or
(iii) A flare that meets the requirements of §265.1033(d).

(2) Control devices must be operating whenever gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device.

(3) An owner/operator using a carbon adsorption system to comply with paragraph (c)(1) of this section must operate and maintain the control device in accordance with the specific requirements of this section.

(4) An owner/operator using a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with paragraph (c)(1) of this section must operate and maintain the control device in accordance with the requirements of §265.1033(i).

(5) An owner/operator must demonstrate that a control device achieves the performance standards of paragraph (c)(1) of this by meeting the specific requirements of this section.

(6) Disputes between the owner/operator and the Regional Administrator concerning the use of a design analysis to demonstrate compliance with the control device performance standards may be resolved by using the results of a performance test performed in accordance with paragraph (c)(5)(iii) of this section.

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Air Emission Standards - Subpart CC (continued)

§265.1090 Recordkeeping Requirements

(a) Owner/operators must keep records as specified below.

(1) For each tank cover installed in accordance with the requirements of §265.1085(b)(2) or §265.1085(b)(3), documentation of compliance with the standards including:
- A description of cover design
- Certification by the owner/operator that the cover meets the design specifications of §265.1091(c).

(2) For each floating membrane installed on a surface impoundment in accordance with the requirements of §265.1086(c), documentation of compliance with the standards including:
- A description of cover design
- Certification by the owner/operator that the cover meets the requirements of §265.1086(e).

(3) For each enclosure used to control air emissions from containers in accordance with the requirements of §265.1087(b)(2)(i), documentation of compliance with the standards including:
- A description of enclosure design
- Certification by the owner/operator that the enclosure meets the requirements of §265.1087(b)(2)(ii).

(4) For each closed-vent system and control device installed in accordance with §265.1088, documentation of compliance with the standards including:

(i) Certification by the owner/operator that the control device is designed to operate at the required performance levels when the unit is, or would be, operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, documentation of compliance with §265.1035(b)(4), including:
- Information that describes control device design in accordance with §265.1035(b)(4)(iii)
- Certification by the owner/operator that the control device meets the applicable specifications.

(iii) If performance tests are used, a performance test plan as specified in §265.1035(b)(3) and all test results.

(iv) Information as required by §§265.1035(c)(1) and (2).

(5) For each container used to meet the requirements of §264.1087(b)(1)(iii), records of all Method 27 tests performed.

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Inspection Procedures - Subpart CC, Section 265.1090

- If a cover, closed-vent system, or control device is scheduled to be used for compliance but has not yet been installed, is there an implementation schedule in the facility operating record?

Note: At a minimum, the implementation schedule should include calendar dates for the following activities: awards of contract or issuance of purchase orders for the required air emission control equipment, initiation of on-site installation of equipment, completion of installation, and performance of any testing to demonstrate that the controls meet Subpart CC standards.

- Does the operating record include up-to-date documentation of compliance with air emission control standards in §265.1085 through §265.1088? Does this documentation include sources used, test/analysis records, engineering/design information, and owner/operator certification statements as specified by §265.1090(a)?

- For owners/operators who use test data to demonstrate air emission control compliance, is there a performance test plan in the facility operating record?

- For each system, is design documentation and operational information, including all elements listed in §265.1090, kept up-to-date in the facility operating record? Note: Parts of this information need only be kept on file for 3 three years.

- Check all monitoring devices to ensure that all operating parameters are met.

- If devices other than thermal vapor incinerators, catalytic vapor incinerators, flares, boilers, process heaters, condensers, or carbon adsorption systems are used, check the facility operating record for monitoring and inspection information indicating proper operation and maintenance.

- Check the facility operating record for analysis or other information related to determining the applicability of Subpart CC. Note that owners/ operators with affected vents which do not fall under emission control standards of §265.1085 through §265.1088 must still have up to date information and data to support the fact that they are not subject to standards (see §265.1090(d)).

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Air Emission Standards - Subpart CC (continued)

§265.1090 Recordkeeping Requirements (continued)

(6) Records for all visual inspections conducted in accordance with the requirements of §265.1089.

(7) Records for all monitoring for detectable organic emissions conducted in accordance with §265.1089.

(8) Records of the date of each attempt to repair a leak, repair methods applied, and the date of successful repair.

(9) Records for all continuous monitoring conducted in accordance with the requirements of §265.1089.

(10) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with §265.1088(c)(3)(ii).

(11) Records for all inspections of each cover installed on a tank in accordance with the requirements of §265.1085(b)(2) or §265.1085(b)(3) including all information required by §265.1091(c).

(b) An owner/operator electing to comply with the alternative tank standards of §265.1085(c) must record the following information:

(1) Date and time that each waste sample is collected for direct measurement of maximum organic vapor pressure as required by §265.1084(c).

(2) Results of each determination for the maximum organic vapor pressure performed in accordance with §265.1084(c).

(3) Records specifying the dimensions and design capacity of the tank.

(c) An owner/operator complying with §265.1091 must record all information as required by §265.1091(c).

(d) An owner/operator electing not to use air emission controls on a particular waste management unit in accordance with the requirements specified in §265.1083(c) must record information used for each waste determination (e.g., test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results are used, the owner/operator must record the date, time, and location of each sample collected in accordance with the requirements of §265.1084.

(e) An owner/operator complying with §265.1083(c)(2)(v) or §265.1083(c)(2)(vi) must record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

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Air Emission Standards - Subpart CC (continued)

§265.1090 Recordkeeping Requirements (continued)

(f) An owner/operator designating a cover unsafe to inspect/monitor in accordance with §265.1089(f)(5) must record the following information in the facility's operating log;

(1) The identification numbers for all tanks with covers that are determined unsafe to inspect and monitor in accordance with the requirements of §265.1089(f)(5), an explanation stating the reasons behind this determination, and the plan and schedule for inspecting and monitoring each cover.

(2) The identification numbers for all tanks with covers that are determined difficult to inspect and monitor in accordance with the requirements of §265.1089(f)(6), an explanation stating the reasons behind this determination, and the plan and schedule for inspecting and monitoring each cover.

(g) All records required by this section, except for those required in paragraphs (a)(1) through (a)(4), must be kept in the facility's operating log for a minimum of three years. All records required by paragraphs (a)(1) through (a)(4) (i.e., documentation of equipment design) must be kept in the operating record until the equipment is replaced or no longer in service.

(h) An owner/operator of a facility that is also subject to the control device standards of 40 CFR Part 60, Subpart VV, or Part 62, Subpart V of the Clean Air Act (CAA), may demonstrate compliance with the applicable sections of this Subpart by documentation pursuant either to this Subpart or the above mentioned sections of the CAA to the extent the requirements of the CAA duplicate Subpart CC requirements. Any recordkeeping that is required by Subpart CC and not by these sections of the CAA must be kept pursuant to the applicable sections of this Subpart.

§265.1091 Alternative Tank Emissions Control Requirements

(a) This section applies to owners/operators of tanks complying with §§265.1085(b)(2) or (b)(3).

(1) Owners/operators complying with §265.1085(b)(2) must design, operate, and maintain a fixed roof and internal floating roof in accordance with the specific requirements of this section.

(2) Owners/operators complying with §265.1085(b)(3) must design, operate, and maintain an external floating roof in accordance with the specific requirements of this section.

(b) Owners/operators complying with paragraph (a) of this section must monitor and inspect the required control equipment as follows:

(1) Owners/operators using an internal floating roof must inspect and monitor the internal floating roof in accordance with the specific requirements of this section.

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Air Emission Standards - Subpart CC (continued)

§265.1091 Alternative Tank Emissions Control Requirements (continued)

(2) Owners/operators using an external floating roof must inspect and monitor the external floating roof in accordance with the requirements of this section.

(c) Owners/operators complying with paragraph (a) of this section must include the following information in the facility operating log in accordance with the requirements of §§265.1090(a)(1) and (a)(11):

(1) For owners/operators using an internal floating roof, the following records must be maintained:

(i) Documentation of control equipment design and certification under paragraphs (a)(1) and (b)(1) of this section.

(ii) Records of each inspection performed under paragraphs (b)(1)(i) through (b)(1)(iv) of this section, including the following information:
- Identification of the tank on which the inspection was performed
- Date of tank inspection
- Observed condition of each component of the control equipment.

(iii) Records and information pertaining to any defects found as described in paragraph (b)(1)(ii) of this section, including descriptions of the nature and dates of any repairs.

(iv) A detailed description of any equipment defects found as a result of any inspections performed in accordance with paragraph (b)(1)(ii), (b)(1)(iii) or (a)(1) of this section.

(2) For owners/operators using an external floating roof, the following records must be maintained:

(i) Documentation of control equipment design and certification under paragraphs (a)(2) and (b)(2)(ii) through (b)(2)(iv) of this section.

(ii) Detailed records of each measurement taken in accordance with paragraph (b)(2) of this section.

(iii) Detailed records of each measurement that exceeds specified limits taken in accordance with paragraph (b)(2)(iv).

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TABLE III-5 PERMITTED FACILITY REGULATORY REQUIREMENTS

Subpart B - General Facility Standards

§§264.10 through §264.17(b) are similar to Part 265 requirements (see Table 111-4)

§264.17(c) Requirements for Ignitable, Reactive, or Incompatible Wastes

When a facility must comply with the general requirements, permitted facilities must document such compliance.

§264.18 Location Standards

(a) Portions of new permitted facilities must not be located within 61 meters of a fault which has had displacement in Holocene time.

(b) A facility located in a 100 year flood plain must be designed, constructed, operated, and maintained to prevent washout unless the waste can be removed or no adverse effects will result if washout occurs.

(c) Placement of any non-containerized or bulk liquid waste in any salt dome formation, salt bed formation, underground mine or cave is prohibited.

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Inspection Procedures - Subpart B, Sections 264.10 through 264.18

Remember:

- General inspection requirements for permitted facilities are usually the same as for interim status facilities.
- Compliance with location standards should be verified during the permit process.
- Inspectors should review the latest version of the Part A Permit/Application, "Facility Identification Section," and the latest version of the Part B Permit/Application, "Facility Location Section," to ensure that the present facility information is consistent.

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Subpart C - Preparedness and Prevention
Subpart D - Contingency Plan and Emergency Procedures
Subpart E - Manifest System, Recordkeeping, and Reporting
Subpart H - Financial Requirements

Subpart C requirements are similar to Part 265 Subpart C requirements.

Subpart D requirements are similar to Part 265 Subpart D requirements.

Subpart E requirements, §264.70 through §264.72, are similar to Part 265 Subpart E requirements.

§264.73 Operating record requirements are similar to §265.73 requirements except that:

The operating record must contain the following:

(7) Notices to generators of appropriate permits.

(9) Annual certification that a program is in place to reduce toxicity and volume of hazardous waste generated by the permittee.

Subpart E requirements, §264.74 through §264.77, are similar to Part 265 Subpart E requirements.

Subpart H requirements are similar to Part 265 Subpart H requirements.

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Inspection Procedures - Subparts C, D, E, and H

Remember:

- General inspection requirements for permitted facilities are usually the same as for interim status facilities.
- Permitted facilities are required to include notices to generators of appropriate permits and annual certification that a waste minimization program is in place in their operating record, whereas interim status facilities are not required to do so.
- Owners/operators may obtain, from the Regional Administrator waivers from meeting aisle space and emergency equipment requirements.
- Inspectors should review the facility's Part B Permit/Application-Part VII, "Contingency Plan & Emergency Procedures Section," to ensure that the facility is complying with the information presented in the facility contingency plan, including procedures to be used in the event of a fire, explosion, or other unplanned occurrence.
- Inspectors should review the facility's Part B Permit/Application-Part VI, "Management Practices Section," to ensure that the facility's operational procedures regarding manifest system, recordkeeping, and reporting are being carried out by facility personnel.
- The financial responsibility requirements apply to owners/operators of all hazardous waste facilities except State and federal hazardous waste facilities. Inspectors should review the facility's Part B Permit/Application-Part X, "Financial Responsibility Section," to ensure that all identified mechanisms for financial assurance are current and appropriate.

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Subpart F - Releases from Solid Waste Management Units

§264.90 Applicability

These regulations apply to owners/operators of facilities that treat, store, or dispose of hazardous waste unless they are exempt under §264.1 or operate a unit which is an engineered structure, does not receive or contain liquid waste or waste containing free liquids, has both inner and outer layers of containment, and has a leak detection system(s) built into each layer which will be maintained and will not allow hazardous constituents to migrate beyond the outer layer.

Owners/operators of land treatment units with treatment zones that do not contain levels of constituents that exceed background levels can eliminate post-closure care requirements. The post-closure care requirements also do not apply to waste piles meeting design standards and to units where there is no potential migration into the uppermost aquifer.

§264.91 Required Programs

All facilities covered under these regulations must conduct a detection monitoring program unless hazardous constituents are detected at the compliance point. In this case, the owner/operator would conduct a compliance monitoring program. If ground water standards are exceeded, a corrective action program under §264.100 must be started.

§264.92 Groundwater Protection Standard

The Regional Administrator will establish the ground water protection standard in the facility permit.

§264.93 Hazardous Constituents

The Regional Administrator will specify in the permit the hazardous constituents to which the standard applies.

§264.94 Concentration Limits

The Regional Administrator will specify in the permit the concentration limits.

§264.95 Point of Compliance

The Regional Administrator will specify the point of compliance in the permit. The point of compliance is a vertical surface located at the hydraulically downgradient limit of the waste management area that extends into the uppermost aquifer.

§264.96 Compliance Period

The compliance period is equal to the number of years equal to the active life of the waste management area and is specified in the permit by the Regional Administrator.

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Inspection Procedures - Subpart F, Sections 264.90 through 264.101

Key Considerations:

- Is the owner/operator engaging in detection or compliance monitoring?
- Are all constituents specified in the permit being monitored?
- Are complete Appendix IX scans and groundwater flow rate and direction evaluations being done as frequently as specified in the permit for compliance monitoring programs?
- Does the groundwater monitoring program follow proper procedures for sample collection, sample preservation and shipment, and chain of custody?
- Does monitoring data show that either background or the ground water protection standard have been exceeded? Have the statistical evaluations been done?
- Has an RFA been performed? If not, you may look at any or all solid waste management units on site.
- Is the facility under corrective action? If so, are the compliance schedules being met?

  Identification of releases from solid waste management units will be done during a RCRA Facility Assessment. The “RCRA Facility Assessment Guidance Manual” is available as a reference.
- Inspectors should review the Part B Permit/Application-Part IV, "Facility Design Section," which includes the requirements for a groundwater monitoring program (Subsection N) if it is required at the facility.

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Subpart F - Releases from Solid Waste Management Units (continued)

§264.98 Detection Monitoring Program

The owner/operator must monitor for indicator parameters that provide a reliable indication of the presence of hazardous constituents in the ground water. The Regional Administrator will specify the parameters in the permit.

The owner/operator must install a monitoring system at the compliance point and establish background levels for the parameters of concern. The owner/operator must monitor semiannually and statistically evaluate any increase or pH changes. If there is a significant increase, he must notify the Regional Administrator within 7 days. If detection monitoring indicates a release, the owner/operator must go to compliance monitoring and obtain a permit modification.

§264.99 Compliance Monitoring Program

The owner/operator must determine whether the regulated units are in compliance with the ground water protection standard. The owner/operator must determine the concentration of hazardous constituents in the ground water at least quarterly. The owner/operator must determine the flow rate and direction in the uppermost aquifer, and analyze for all Appendix IX constituents at least annually. If there is a statistically significant difference between the observed concentration and the groundwater protection standard for each constituent, the owner/operator shall notify the Regional Administrator and apply to make the permit changes necessary for a corrective action program.

§264.100 Corrective Action Program

An owner/operator required to take corrective action must implement a program that prevents hazardous constituents from exceeding their groundwater protection standard by removing or treating the hazardous waste constituents. A groundwater monitoring program that can demonstrate the effectiveness of the corrective action must be implemented. The owner/operator can terminate corrective action measures if he can demonstrate that the groundwater protection standard has not been exceeded for 3 consecutive years.

§264.101 Corrective Action for Solid Waste Management Units

The owner/operator of a facility must implement corrective action for releases of hazardous waste or constituents from any solid waste management unit that affect human health and the environment. Corrective action required will be specified in the permit.

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Subpart G - Closure and Post-Closure

§264.110 Applicability

The following regulations (§§264.111 through 264.115) apply to the owners/operators of all hazardous waste management facilities unless §264.1 provides otherwise.

§264.112 Closure Plan; Amendment of Plan

(c) The owner/operator may request a permit modification to amend the closure plan any time prior to closure when changes occur that will affect the closure of the unit.

§264.113 through §264.117 are similar to Part 265 requirements. See Table III-4.

§264.118 Post-Closure Plan; Amendment of Plan

(d) The owner/operator may request a permit modification to amend the post-closure plan any time during the active life or the post-closure care period when changes occur that will affect post-closure care.

§§264.119 through 264.120 are similar to Part 265 requirements. See Table III-4.

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Inspection Procedures - Subpart G, Sections 264.110 through 264.120

Key Considerations:

- Have any amendments to closure or post-closure plans been accompanied by a request for a permit modification?
- Have post-closure plans been completed for waste piles and surface impoundments even though they will not be closed as a landfill, as required?
- Inspectors should review the facility's Part B Permit/Application-Part IX, "Closure Plan Section," which includes detailed descriptions of the steps necessary to decontaminate the facility and how much it would cost.
- Inspectors should ensure that any closure activities are in accordance with the approved facility closure plan and that facility post closure documentation includes required notices and certifications.

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Subpart I - Use and Management of Containers

§§264.170 through 264.174 are similar to Part 265 requirements. See Table III-4.

§264.175 Containment

(a) & (b) Container storage areas must have a containment system designed and operated as follows:

(1) Impervious base, free of cracks;

(2) Sloped or designed to drain off leaks, spills, or precipitation, unless containers are elevated;

(3) System must be able to contain 10% of the volume of the free liquids in all containers or the largest container, whichever is greater;

(4) Run-on must be prevented unless the system has the capacity to contain excess liquid;

(5) Accumulated liquid and waste must be removed in a timely manner.

(c) Container storage areas that do not hold wastes with free liquid do not need a containment system, except for F020, F021, F022, F023, F026, and F027, which must always have a containment system which is in compliance with (2) above.

§264.176 and §264.177 are similar to Part 265 requirements. See Table III-4.

§264.178 Closure

At closure, all hazardous wastes and associated residues must be removed from the containment system.

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Inspection Procedures - Subpart I, Sections 264.170 through 264.178

Key Considerations:

- Is the containment system free from cracks, gaps, or other signs of deterioration, and without any standing liquids (unless recent precipitation or spills have occurred)? How long has precipitation been there?
- Does the containment system have sufficient excess capacity to collect precipitation and run-on and still meet the 10% requirement for free liquids?
- Is the evaluation and disposal method of any contained liquid within the containment system adequate?
- After closure, has the decontamination of the containment system been documented?
- Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design Section (Subsection A)," to ensure that facility container utilization is consistent with that specified and approved.

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Subpart J - Tank Systems

§§264.190 through 264.199 are similar to §§265.190 through 265.199. See Table III-4.

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Inspection Procedures - Subpart J, Sections 264.190 through 264.199

Remember:

- The regulations applicable to above-, on-, in-, and underground tanks that can be entered apply in States without authorized RCRA programs only, unless a State amends its statute. Requirements for unenterable, underground tank systems and leak detection requirements for all new underground tank systems apply in all States.

- Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design Section (Subsection B)," to ensure that facility tank utilization is consistent with that specified and approved.

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Subpart K - Design of Surface Impoundments

§264.221 Design and Operating Requirements

(a) Any surface impoundment that is not new, a replacement or a lateral expansion must have a liner that is designed, constructed, and installed to prevent any migration out of the impoundment during its active life.

(b) Waivers for (a) above may be obtained from the Regional Administrator.

(c) New surface impoundments, replacements, or lateral expansions must have two or more liners and a leachate collection system between liners.

(d) Other liner designs can be used if they are demonstrated to be as effective as those prescribed in (c) above and approved by the Regional Administrator.

(e) Waivers may be obtained from the Regional Administrator for (c) above.

(f) A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping, overfilling, wind and rain action, run-on, malfunction, and human error.

(g) Dikes must be designed, constructed, and maintained to prevent massive failure.

(h) The permit will specify all the requirements.

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Inspection Procedures - Subpart K, Section 264.221

Key Considerations:

- What is the maintenance and condition of the dikes and any other visible portions of the surface impoundment?
- Is there any evidence of overtopping or other types of releases?
- Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design Section (Subsection G)," to ensure that facility surface impoundments are designed, operated, and maintained (including inspections) in accordance with the currently-approved permit.
- Placement of wastes in a surface impoundment meets the definition of land disposal under §268.2(c). Therefore, no hazardous wastes which are subject to LDR may be placed in a surface impoundment unless they meet treatment standards in Part 268, Subpart D or qualify for the treatment in surface impoundment exemption in §268.4.

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Subpart K - Monitoring and Inspection

§264.226 Monitoring and Inspection

(a) During construction and installation, liners and cover systems must be inspected for damage and imperfections.

(b) While the surface impoundment is in operation, it must be inspected weekly and after storms for:

- malfunctions or improper operation of overtopping controls
- sudden drops in the level of contents
- erosion or other signs of deterioration

(c) The owner/operator must obtain certification of structural integrity.

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Inspection Procedures - Subpart K, Section 264.226

Key Considerations:

- Has all documentation of inspections during construction and installation been reviewed?
- Has documentation of inspections and adequate inspection procedures been properly undertaken?
- Has the owner/operator obtained certification of structural integrity?

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Subpart K - Emergency Repairs; Contingency Plans

§264.227 Emergency Repairs; Contingency Plans

(a) A surface impoundment must be removed from service if the liquid level drops without a known reason, or a dike leaks.

(b) If one of the above conditions occurs, the owner/operator must immediately:

- shut off inflow
- stop leaks and contain surface leakage
- take measures to prevent catastrophic failure
- if leak cannot be stopped, empty the impoundment and notify the Regional Administrator within 7 days.

(c) The contingency plan must specify the procedures necessary to meet the requirements of (b) above.

(d) Once an impoundment is removed from service due to leak or failure, prior to returning to service, the appropriate repairs on the impoundment must be certified.

(e) Once an impoundment is removed from service due to leak or failure and is not to be repaired, it must be closed.

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Inspection Procedures - Subpart K, Section 264.227

Key Considerations:

- Is there evidence of a leak or failure in the operating record?
- Was the contingency plan followed and was it adequate to contain any releases in a timely manner?
- After a leak or other failure, is the unit being repaired or is it closing? Were the repairs certified?
- If the facility is operating a surface impoundment containing F020, F021, F022, F023, F026, or F027 wastes, the facility should have a special waste management plan approved. Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design Section (Subsection G)," to ensure that the facility is in compliance with this requirement [40 CFR §§264, 231(a), and 270.17(i)(1)].

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Subpart K - Closure and Post-Closure Care

§264.228 Closure and Post-Closure Care

(a) At closure, the owner/operator must either:

(1) remove or decontaminate all waste residues, structures and equipment contaminated with waste and leachate, contaminated subsoils, and contaminated containment system components; or

(2) eliminate free liquids or solidify wastes so that the impoundment will support a final cover.

(b) If some waste residues are left in place upon closure, the owner/operator must comply with post-closure requirements and maintain the effectiveness of the final cover, maintain and monitor the leak detection system, and the integrity of the groundwater monitoring system.

(c) If an owner/operator plans to close under (a)(1) above and the impoundment does not comply with the liner requirements of §264.221(a), he still must have a plan for complying with paragraph (a)(1) above and a contingent plan for complying with (a)(2). In addition, he must have a contingent post-closure plan in case he cannot remove all the contaminated material. Cost estimates must also be provided for the contingent closure and post-closure care.

§264.229 through §264.231 are similar to Part 265 requirements. See Table III-4.

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Inspection Procedures - Subpart K, Section 264.228

Key Considerations:

- Has the facility elected to clean close or to close as a landfill?
- If the facility is closing by removing or decontaminating all material, can this fact be properly documented? If not, has the owner/operator implemented the contingent closure and post-closure plans?
- If the surface impoundment is closing with material in place, is the impoundment free of standing water and will (does) it support a cover?
- Inspectors should review the facility's Part B Permit/Application-Part IX, "Closure Plan, " to ensure that facility closure activities are consistent with the approved plan.

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Subpart L - Design of Waste Piles

§264.251 Design and Operating Requirements

(a) A waste pile must have a liner and a leachate collection system.

(b) A facility may be exempt from (a) above if it can prove its design characteristics and operating practices, together with location characteristics, will prevent migration of hazardous constituents into ground water.

(c) Run-on must be diverted around the active portion of the pile.

(d) Run-off must be collected and controlled.

(e) Collection and holding facilities must be emptied after storms.

(f) Waste piles must be maintained in a manner that prevents dispersal of particulates by wind.

§264.254 Monitoring and Inspection

(a) During construction, liners and covers must be inspected for defects.

(b) Waste piles must be inspected weekly and after storms for deterioration, proper control of run-on and runoff, control of wind dispersal, and the proper function of leachate collection systems.

§264.256 and §264.257 are similar to Part 265 requirements. See Table III-4.

§264.259 Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027

The hazardous wastes listed above (dioxin-containing) must not be placed in a waste pile that is not enclosed unless the pile is operated with a management plan approved by the Regional Administrator.

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Inspection Procedures - Subpart L, Sections 264.251 through 264.259

Key Considerations:

- Is the facility engaging in proper removal of collected runoff a short time after storms?
- Is the evaluation and disposal of the runoff and leachate adequate?
- Has documentation of inspections conducted during construction been located and properly reviewed?
- Has documentation of weekly operational inspections been properly completed?

- Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design Section (Subsection F)," to ensure that the facility is in compliance with the inspection requirements, including:

  -- Run-on and run-off control system
  -- Wind dispersal system
  -- Leachate collection and removal system.

- Inspectors should ensure that the facility has an approved special management plan for piles containing wastes F020, F021, F022, F023, F026, and F027 [40 CFR §§259, and 270.18(i)].

> Placement of wastes in a waste pile meets the definition of land disposal under §268.2(c). Therefore, no hazardous wastes which are subject to LDR may be placed in a waste pile unless they meet treatment standards in Part 268, Subpart D.

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Subpart L - Closure and Post-Closure Care

§264.258 Closure and Post-Closure Care

(a) At closure, the owner/operator must remove or decontaminate all waste residues, structures and equipment contaminated with waste and leachate, contaminated subsoils, and contaminated containment system components.

(b) If some waste residues are left in place upon closure, the owner/operator must close the facility and comply with post-closure requirements that apply to landfills.

(c) The owner/operator of a waste pile that does not comply with the liner requirements and is not exempt must include in the closure plan both a plan for complying with paragraph (a) above and a contingent plan for paragraph (b). The owner/operator must also prepare a contingency post-closure plan in case he cannot remove all the contaminated material. Cost estimates must also be provided for the contingent closure and post-closure care.

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Inspection Procedures - Subpart L, Section 264.258

Key Considerations:

- Can the owner/operator document the removal or decontamination of all material? If not, has the owner/operator implemented the contingent closure and post-closure plans?

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Subpart M - Land Treatment

§264.271 Treatment Program

(a) A land treatment program must be established that ensures that hazardous constituents placed in the treatment zone are degraded, transformed, or immobilized within the treatment zone.

(b) The Regional Administrator will specify in the permit the hazardous constituents that must be degraded, immobilized, or transformed.

(c) The Regional Administrator will specify vertical and horizontal dimensions of the treatment zone.

§264.272 Treatment Demonstration

(a) For each waste that will be applied to the treatment zone, the owner/operator must demonstrate that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.

(b) In making this demonstration, the owner/operator may use field tests, laboratory analyses, available data, or operating data.

(c) Field or laboratory data must accurately simulate operating conditions, be likely to show that the waste will be completely degraded, transformed, or immobilized in the treatment zone, and must be conducted to protect human health and the environment.

§264.273 Design and Operating Requirements

(a) The owner/operator must design, construct, operate, and maintain the unit to maximize degradation, transformation, and immobilization. The runoff management system must be able to at least control the water from a 24-hour, 25-year storm.

(b)(c)(d)(f) The owner/operator must design, construct, operate, and maintain the unit to minimize runoff, control run-on, and control water volume and wind dispersal.

(e) Any collection and holding facilities which held hazardous constituents during the active life of the unit gathered from run-on and runoff control systems must be emptied or otherwise managed expeditiously after storms.

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Inspection Procedures - Subpart M, Sections 264.271 through 264.273

Key Considerations:

- Has the owner/operator obtained either a short-term or two phase permit if he is conducting laboratory or field tests as part of the land treatment demonstration?
- Is the facility complying with the application rates and waste types specified in the permit?

- Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design Section (Subsection I)," to ensure that all land treatment activities are being conducted according to a currently-approved plan.
- Placement of wastes in a land treatment unit meets the definition of land disposal under §268.2(c). Therefore, no hazardous wastes subject to LDR may be placed in a land treatment unit unless they already meet treatment standards.

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Subpart M - Land Treatment (continued)

§264.278 Unsaturated Zone Monitoring

(a) The owner/operator must monitor the soil and soil-pore liquid to determine whether any hazardous constituents migrate out of the treatment zone.

(b) The owner/operator must install an unsaturated zone monitoring system at a sufficient number of sampling points to yield samples that are representative of background soil-pore liquid quality and the quality of soil-pore liquid below the treatment zone.

(c) Background must be established for each hazardous constituent.

(d) Soil monitoring and soil-pore liquid monitoring must be conducted directly below the treatment zone.

(e) Consistent sampling and analysis procedures must be used.

(f) The owner/operator must determine when a statistically significant change occurs over background.

(g) & (h) The Regional Administrator must be notified when a significant change is found that is not due to error or other sources. Within 90 days, the owner/operator must submit an application for permit modification to modify the facility's operating practices.

§264.279 Recordkeeping

Hazardous waste application dates and rates must be included in the operating record.

§264.283 Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027

The hazardous wastes listed above (dioxin-containing) must not be placed in a land treatment unit unless approved by the Regional Administrator.

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Inspection Procedures - Subpart M, Sections 264.278 through 264.283

Key Considerations:

- Is the soil-pore liquid and soil monitoring being conducted according to the procedures and frequency specified in the permit?
- Operating record should be reviewed for hazardous waste application dates and rates.

☞ Refer to the "Permit Guidance Manual on Hazardous Waste Land Treatment Demonstrations" for a complete discussion of land treatment units.

- Inspectors should ensure that the facility has an approved special waste management plan for land treatment units containing wastes F020, F021, F022, F023, F026, and F027.

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Subpart M - Closure and Post-Closure Care

§264.280 Closure and Post-Closure Care

(a) (1,2) During the closure period, the owner/operator must continue all operations necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone, and to minimize runoff.

(3,4) Maintain run-on control and runoff management systems.

(5) Control wind dispersal of hazardous waste.

(6,7) Continue to comply with prohibitions or conditions on growing food chain crops and to monitor the unsaturated zone.

(8) Establish vegetative cover.

(b) Notify RA after closure is complete and provide certification.

(c) (1) During the post-closure care period, the owner/operator must continue all operations necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone in a manner consistent with other post-closure activities.

(2,3,4) Maintain a vegetative cover, run-on control and runoff management systems.

(5) Control wind dispersal of hazardous waste.

(6,7) Continue to comply with prohibitions or conditions on growing food chain crops and to monitor the unsaturated zone.

(d) If the owner/operator can demonstrate that the levels of hazardous wastes left in the soil does not exceed background, post-closure care is not required.

§264.281 is similar to Part 265 requirements. See Table III-4.

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Inspection Procedures - Subpart M, Sections 264.280 through 264.281

Remember:

- The land treatment must still be operated and maintained to promote further degradation, immobilization, and transformation of hazardous constituents during closure and post-closure care.
- Certification of closure may be provided by an independent soil scientist or an independent engineer.
- Vegetative cover must be established unless the background levels of wastes remaining in the soil have not been exceeded.
- Inspectors should review the facility's Part B Permit/Application-Part IX, "Closure Plan," to ensure that facility closure activities conform to those approved.

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Subpart N - Landfills

§264.301 Design and Operating Requirements

(a) Landfills not regulated under (c) below or interim status must have a liner and a leachate collection system above the liner.

(b) A landfill may be exempt from (a) above if the owner/operator can demonstrate that an alternate design and location characteristics prevent migration.

(c) New or expanded facilities need two or more liners and a leachate collection system above and between the liners.

(d) A landfill may be exempt from (c) above if the owner/operator can demonstrate that an alternate design and location characteristics prevent migration. This alternative design and operating practice must be approved by the Regional Administrator.

(e) The double liner requirement can be waived for monofills by the Regional Administrator.

(f) A landfill is exempt from (c) if it is compliance with §3004(O)(1)(A)(i) and (O)(5) of RCRA and there is no reason to believe that the liner is not functioning.

(g) Run-on flow control system must be capable of preventing flow onto active portion of landfill during peak discharge from at least a 25-year storm.

(h) Runoff management system must be capable of collecting and controlling at least the water volume resulting from a 24-our, 25-year storm.

(i) Collection or holding facilities associated with run-on and runoff systems must be emptied expeditiously after storms.

(j) Wind dispersal of particulates must be controlled.

§264.303 Monitoring and Inspection

(a) Liners and cover systems must be inspected during and after construction for defects or imperfections.

(b) Landfills must be inspected weekly during operation and after storms for deterioration and malfunctions, the presence of leachate, and properly functioning leachate collection systems.

(c) (1) An owner/operator who is required to have a leak detection system must keep records of the amount of liquid removed from each leak detection system sump at least once a week during the active life and closure period.

(2) After the final cover is installed the amount of liquids removed from each leak detection sump must be recorded at least monthly.

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Inspection Procedures - Subpart N, Sections 264.301 through 264.316

Key Considerations:

- Is the owner/operator conducting the inspections as required? Are the leachate collection systems functioning properly?

- Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design (Subsection H)," to ensure that the facility is conducting approved landfill operations.

> Section 3004 of RCRA requires that certain landfills meet minimum technological requirements (MTRs), including double liners and a leachate collection system within four years of being subject to regulation. Part 268 has given additional importance to the "min-tech" requirements but does allow non-MTR impoundments four years to retrofit even if they receive wastes subject to a national capacity variance or a case-by-case extension.

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Subpart O - Incinerators

§264.310 Closure and Post-Closure

Closure and post-closure requirements are similar to those in §265.310 except that the owner/operator must continue to operate the leachate collection and removal system until leachate is no longer detected.

§264.312 is similar to Part 265 requirement. See Table III-4.

§264.317 Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027

The hazardous wastes listed above (dioxin-containing) must not be placed in a landfill unless the owner/operator operates the landfill in accordance with a management plan for these wastes that is approved by the Regional Administrator.

§264.341 Waste Analysis

(a) The owner/operator must include a waste analysis in Part B applications or with trial burn plans.

(b) Waste analysis must be conducted throughout normal operations.

§264.342 Principal Organic Hazardous Constituents (POHC)

(a) POHCs must be treated to performance standards discussed in §264.343.

(b) One or more POHCs will be specified in the permit for each waste burned.

§264.343 Performance Standards

(a) Destruction and removal efficiency (DRE) must equal 99.99% for each POHC and 99.9999% for POHC designated for dioxin-containing listed wastes.

(b) Stack emissions of HCL must not exceed the larger of 1.8 kg/hr or 1 percent of the HCL in the stack gas prior to entering any pollution control equipment.

(c) Incinerators must not emit greater than 180 mg/dry std cubic meter (when corrected for O_2 in the stack gas) of particulate matter.

(d) Failure to meet the performance standards of this section, despite compliance with permit conditions, may be taken as information justifying modifications, revocation, or reissuance of a permit.

§264.344 Hazardous Waste Incinerator Permits

(a) Wastes must only be burned as authorized in the permit except for approved trial burns and if the waste is exempted by the Regional Administrator.

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Inspection Procedures - Subpart O, Sections 264.341 through 264.344

Key Considerations:

- Have DREs for each POHC been demonstrated? Remember: for certain dioxin wastes the demonstration is on harder-to-incinerate POHCs.
- Do the analyses of the waste feed show that it is the same as that specified in the relevant permit?
- Does compliance with the operating conditions ensure compliance with the performance standards? If not, a new trial burn could be ordered.

- Inspectors should review the facility's Part B Permit/Application-Part IV, "Facility Design (Subsection E)," to ensure that incinerator operations conform to those approved.
- Look for modification of incinerator equipment that may impact incinerator operations.

Refer to Incinerator Checklist in Appendix IV of this Manual for more assistance.

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Subpart O - Incinerators (continued)

§264.345 Operating Requirements

(a) An incinerator must be operated under the requirements specified in the permit.

(b) For each waste feed, the permit will specify waste feed composition and acceptable operating conditions.

(c) During start-up or shut-down, hazardous wastes must not be fed into the incinerator unless operating conditions are met.

(d) Fugitive emissions from the combustion zone must be controlled.

(e) Incinerators must have automatic waste feed shut-off systems when conditions deviate from limits including CO, waste feed rate, temperature, or combustion gas velocity indicators.

(f) Incinerators must cease operation when waste feed, incinerator design, or operating condition limits in the permit are exceeded.

§264.347 Monitoring and Inspection

(a) The owner/operator must conduct the following monitoring and inspections while incinerating:

(1) Combustion temperature, waste feed rate, and combustion gas velocity must be monitored continuously.

(2) Carbon monoxide must be monitored continuously.

(3) Sampling and analysis of the waste and emissions must be conducted as specified to determine DRE.

(b) Incinerators and associated equipment must be inspected daily for leaks, spills, etc.

(c) Emergency and cutoff systems and associated alarms must be tested weekly.

(d) Monitoring and inspection data must be recorded in operating log.

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Inspection Procedures - Subpart O, Sections 264.345 through 264.347

Key Considerations:

- Are the operating requirements specified in the permit being met at all times when incinerating hazardous wastes?
- Are the emergency cut-off systems operational and set at specified limits? Are the indicators for CO, temperature, etc. tied to the cut-off system?
- Are the continuous monitoring systems working properly?
- Has equipment been checked for leaks, fugitive emissions, and structural integrity?
- Are waste types consistent with those specified in the permit?
- Are disruptions in incinerator operations documented? Were effective corrective measures taken if necessary?
- Are necessary monitoring and inspections conducted?

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Subpart W - Drip Pads

This subpart is similar to Part 265. See Table III-4.

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Corrective Action for Solid Waste Management Units

§264.552 Corrective Action Management Units (CAMUs)

(a) In order to implement a corrective action, the Regional Administrator may designate one or more CAMUs.

(1) Placement of remediation wastes into or within a CAMU does not constitute land disposal of hazardous wastes.

(2) Consolidation or placement of remediation wastes into or within a CAMU does not create a unit subject to minimum technology requirements.

(b) (1) The Regional Administrator may designate a regulated unit or incorporate a regulated unit into a CAMU if:

(i) The unit has begun the §264.113 or §265.113 closure process; and

(ii) Inclusion of the regulated unit will enhance the effective implementation of the corrective action.

(b) (2) The Subpart F, G, and H requirements and unit-specific requirements of Parts 264 or 265 continue to apply to the regulated unit after it is incorporated into the CAMU.

(c) The Regional Administrator shall designate a CAMU in accordance with the following:

(1) The CAMU shall facilitate reliable, effective, protective, and cost-effective remedies;

(2) The CAMU waste management activities shall not create unacceptable risks to humans or the environment;

(3) The CAMU shall include uncontaminated areas of the facility only if this is more protective than management of such wastes at contaminated areas of the facility;

(4) Areas within the CAMU where wastes remain after closure must be managed to minimize future releases;

(5) The CAMU shall expedite the timing of remedial activity when appropriate;

(6) The CAMU shall use treatment technologies which enhance the long-term effectiveness of remedial actions; and

(7) Where practical, the CAMU shall minimize the land area of the facility where waste will remain in place after closure of the CAMU.

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Inspection Procedures - Subpart S, Section 264.552

Key Considerations:

During an inspection of a CAMU, consider the following issues:

- Does the actual aereal configuration of the CAMU match the designated configuration in the permit or order?
- If the CAMU incorporates regulated units, are these units in compliance with the requirements in Subparts F, G, and H? Are they in compliance with relevant Part 264 or 265 standards?
- Do the CAMU waste management activities create unacceptable risks to humans or the environment?
- Does the CAMU include areas of the facility that were previously uncontaminated? Does the permit or order allow the inclusion of these areas within the CAMU?
- If the CAMU has been closed, are the areas within the CAMU managed in a manner so as to minimize future risks?

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Corrective Action for Solid Waste Management Units (continued)

§264.552 Corrective Action Management Units (CAMUs) (continued)

(e) The Regional Administrator shall specify, in the permit or order, the requirements for CAMUs to include:

-- Aereal configuration of CAMU
-- Waste management practices
-- Groundwater monitoring requirements
-- Closure and post-closure requirements.

(f) The Regional Administrator shall document the rationale for designating CAMUs and shall make documentation available to the public.

(g) Incorporation of the CAMU into an existing permit must be approved by the Regional Administrator.

(h) The designation of a CAMU does not change EPA's existing authority to address clean-up levels, media-specific points of compliance, or other remedy selections.

§264.553 Temporary Units (TUs)

(a) For tanks and containers which are used temporarily to store or treat hazardous remediation waste, the Regional Administrator may determine that standards alternative to Subpart I or J are applicable.

(b) Temporary units to which alternative standards apply, must:

(1) Be located within the facility boundary, and

(2) Be used only to treat or store remediation wastes.

(d) The Regional Administrator shall specify in the permit or order the length of time a temporary unit shall operate. The time period must be less than a year. The Regional Administrator shall specify the design, operating, and closure requirements for the unit.

(e) The unit may operate longer than one year if the Regional Administrator determines that its operation poses no threat and its use is necessary to implement the site remedial actions.

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Inspection Procedures - Subpart S, Section 264.553

Key Considerations:

Several questions should be asked during the inspections of a TU:

- Is operation of the TU specified in the facility permit?
- If not, was a RCRA §3008(h) order issued allowing its operation?
- What type of unit is being used as a temporary unit? Remember: only tanks and containers can be used as TUs.
- What type of waste does the unit store or treat? Is it waste other than remediation waste?
- How long has the unit stored the remediation waste?

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TABLE III-6 STANDARDS FOR MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

Recyclable Materials Used in Manner Constituting Disposal

§266.20 Applicability

(a) These regulations apply to recyclable materials applied to, or placed on land:

(1) Without mixing with other substances; or

(2) Mixed with any other substances.

(b) Products produced from recyclable material for public use that are used in a manner constituting disposal are not subject to regulation if they are inseparable, and the products meet LDR treatment standards for each recyclable material they contain.

§266.21 Standards for Generators and Transporters

Generators and transporters of the applicable recyclable materials are subject to applicable requirements of Parts 262 and 263 as well as the notification requirements (RCRA §3010).

§266.22 Standards for Storage

Owners/operators that store recyclable material in a manner that constitutes disposal are regulated under applicable provisions of Subparts A through L of Parts 264 and 265, and Parts 270 and 124.

§266.23 Standards for Users

(a) Owners/operators that use recycled materials in a manner that constitutes disposal are regulated under Subparts A through N of Parts 264 and 265 and Parts 270 and the notification requirement.

(b) The use of oil or other material that is contaminated with dioxin or any other hazardous waste (except if the waste is identified solely on the basis of ignitability) for dust suppression or road treatment is prohibited.

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Inspection Procedures - Subpart C, Sections 266.20 through 266.23

Key Considerations:

- Does the waste and management practice meet the criteria set forth in §266.20?
- If waste oil or other material is being used for dust suppression or road treatment, has it been tested for dioxin?
- If waste oil or other material is being used for dust suppression or road treatment, is it only hazardous for ignitability? If it is a petroleum waste, is it prohibited because of TC organic constituent levels (e.g., benzene)?

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Used Oil Burned for Energy Recovery

NOTE: The used oil regulations contained in Subpart E of Part 266 were removed and replaced by the revised standards contained in Part 279. See III-1.

§266.40 Applicability

(b) "Used oil" is any oil refined from crude oil that has been used resulting in physical or chemical impurities.

(c) Used oil containing more than 1000 ppm of total halogens is presumed to be a hazardous waste regulated under Subpart D. This presumption may be rebutted.

(d) Used oil that exhibits a characteristic of hazardous waste, provided that it is not mixed with a hazardous waste, or contains waste from a CESQG, is regulated under this Subpart.

(e) Used oil that exceeds any specification level is subject to this Subpart when burned for energy recovery but is termed “off-specification used oil fuel.”

§266.41 Prohibitions

(a) A person may market off-specification used oil only to burners or other marketers who have notified EPA and received an EPA identification number and to burners who burn only in an industrial furnace or boiler. A boiler may be a space heater if the oil is from do-it-yourselfers, burns less than 0.5 million Btu per hour, and combustion gasses are vented to the outdoors.

§266.42 Standards for Generators

(b) Generators who market used oil directly to a burner are subject to §266.43 marketer regulations.

(c) Generators who burn used oil are subject to §266.44 burner regulations.

§266.43 Standards for Marketers

(a) The following persons are not marketers subject to this regulation: generators or collectors who provide oil to persons who process it, but do not burn it unless incidentally for purposes of processing.

(b) Marketers:

(1) Who manage used oil fuel are subject to the regulations unless they obtain an analysis of the used oil;

(2&3) Must follow prohibitions in §266.41 and notify EPA of activity; and

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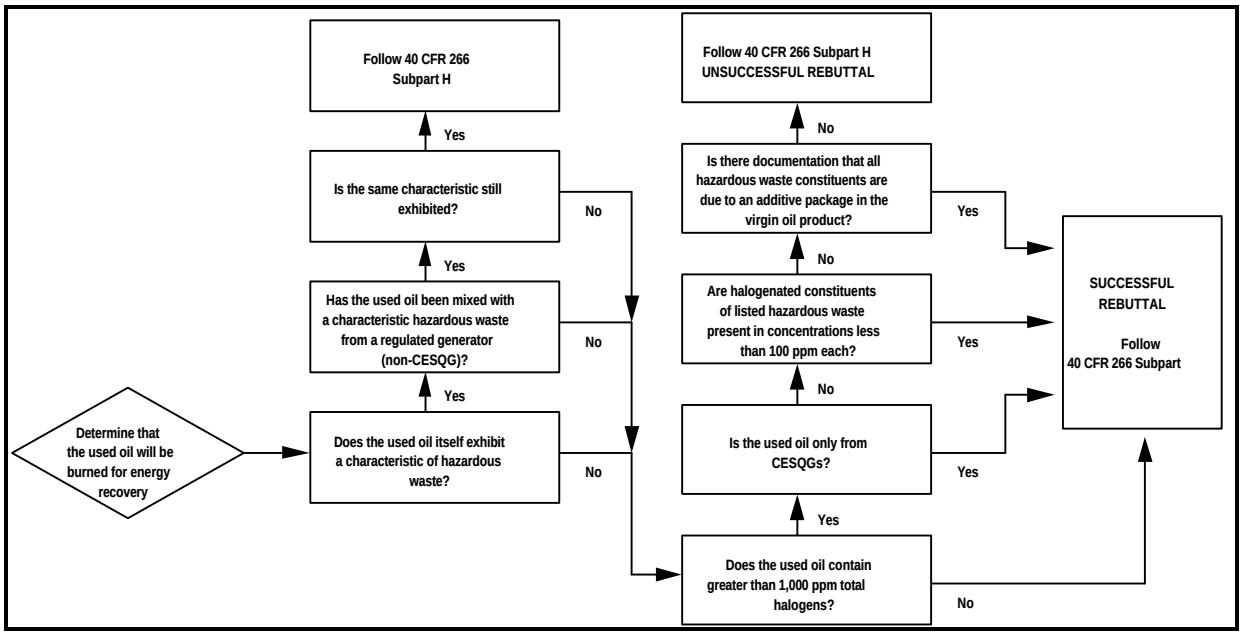
Inspection Procedures - Subpart E, Sections 266.40 through 266.44

Key Considerations:

- Has the State where the facility is located adopted the new used oil regulations in Part 279? If so, use those regulations to determine compliance. If not, follow the requirements of Part 266 Subpart E.
- Has the used oil been analyzed to determine if it meets specifications?
- Does the energy recovery unit meet the definition of a boiler or industrial furnace?

USED OIL BURNED FOR ENERGY RECOVERY

Identifying the Used Oil and Rebuttable Presumption



If used oil meets the criteria of Subpart E, then generators, markets, and burners do not comply with any hazardous waste regulations, including hazardous waste tank regulations. However, if a used oil tank is underground and meets the UST criteria, then the tank is regulated as a petroleum tank under Part 280.

Because used oil is not considered a hazardous waste, it is not part of a generator's monthly hazardous waste count.

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Used Oil Burned for Energy Recovery (continued)

§266.43 Standards for Marketers (continued)

(4) Use an invoice system for off-specification oil containing an invoice number, the marketer's and the recipient's respective EPA identification numbers, the name and address of both facilities, the quantity, the date and the following statement: This used oil is subject to EPA regulation under 40 CFR Part 266.

(5) Before initial shipment to any burner or other marketer, the first marketer must obtain a certification stating that EPA has been notified of waste oil activity, and that the recipient will only burn waste in an industrial furnace or boiler.

(6) Marketers of oils that meet specification must keep the analysis, the name and address of the recipient, the quantity of fuel delivered, the date, and a cross reference to the analysis for three years.

(ii) Marketers of off-spec oil must keep a copy of each invoice and certification for three years.

§266.44 Standards for Burners

Burners must:

(a) Comply with §266.41(b) prohibition;

(b) Notify EPA of used oil activities, except burners who burn specification oils;

(c) Before accepting the first shipment of off-specification fuel, provide the marketer with notification certifying that EPA knows of the burner's management activities, and that the fuel will be burned only in a boiler or industrial furnace;

(d) Obtain analyses (or other information) that the oil meets the specification of §266.40(e) if the burner treats off-specification oil by processing or other treatment; and

(e) Keep a copy of each invoice, analysis, and certification for three years.

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Recyclable Materials Utilized for Precious Metal Recovery

§266.70 Applicability and Requirements

(a) These regulations apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, and ruthenium.

(b) Persons who generate, transport or store the above materials must:

(1) Notify EPA; and

(2) Comply with Subpart B of Part 262 (for generators); §§263.20 and 263.21 (for transporters); and §265.71 (use of the manifest system) and §265.72 (manifest discrepancies) to document that they are not accumulating speculatively.

(c) Persons who store the above materials must keep the following records:

(1) Volume of material at beginning of each calendar year;

(2) Amount of materials generated or received during year; and

(3) Amount of materials remaining at the end of the year.

(d) Recyclable materials regulated under Subpart F that are accumulated speculatively (§261.1(c)) are subject to all provisions of Parts 262 through 265, 270, and 124.

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Inspection Procedures - Subpart F, Section 266.70

Key Considerations:

- Is the recyclable material being accumulated for speculative purposes?
- The recyclable materials will be subject to the generator export requirements under Part 262.

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Reclamation of Spent Lead-Acid Batteries

§266.80 Applicability and Requirements

(a) Persons who generate, transport, or collect spent batteries, but do not reclaim them, are not subject to these regulations.

(b) Owners/operators of facilities that store spent batteries before reclaiming must:

(1) Notify EPA;

(2) Comply with all applicable provisions in Subparts A, B (but not waste analysis), C, D, E (but not §§264.71 or 264.72) and F through L of Part 264;

(3) Comply with all applicable provisions in Subparts A, B (but not waste analysis), C, D, E (but not §§265.71 or 265.72), and F through L of Part 265; and

(4) Comply with all applicable provisions of Parts 270 and 124.

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Inspection Procedures - Subpart G, Section 266.80

- Has a reclaiming facility that stores before reclaiming complied with the applicable parts of Part 264?

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Hazardous Waste Burned in Boilers and Industrial Furnaces

§266.100 Applicability

(b) The following hazardous wastes and facilities are not subject to Subpart H requirements:

(1) Used oil burned for energy recovery that is a hazardous waste solely because it exhibits a hazardous characteristic.
(2) Gas burned for energy recovery that is recovered from a solid or hazardous waste landfill.
(3) Hazardous wastes that are exempt from regulation under §§261.4 and 261.6(a)(3)(v-viii), and §261.5 CESQG hazardous waste.
(4) Coke ovens burning only K087.

(c) (1) Owners/operators of smelting, melting, and refining furnaces (other than owners/operators of lead or nickel-chromium recovery furnaces or metal recovery furnaces that burn baghouse bags used to capture metallic dusts emitted by steel manufacturing) that process hazardous waste solely for metal recovery are conditionally exempt from §§266.102 through 266.111 but must still comply with §§266.101 and 266.112. In order to be exempt from the requirements of §§266.102 through 266.111, a facility must:

(i) Provide a one-time written notice of metal recovery activities and written claim of the exemption;

(ii) Sample and analyze the hazardous waste and other feedstocks using SW-846 methods or alternative methods which meet or exceed the SW-846 performance levels. The methods used must be clearly noted in all compliance documentation; and

(iii) Maintain records at the facility documenting compliance for at least three years.

(2) A hazardous waste that meets either of the following criteria is not processed solely for metal recovery:

(i) The hazardous waste has a total concentration of organic compounds listed in Part 261, Appendix VIII, of this chapter exceeding 500 ppm by weight, as fired, and is therefore considered to be burned for destruction. The concentration of organic compounds in the waste as generated may be reduced to the 500 ppm limit by a bona fide treatment but may not be diluted to reach the 500 ppm limit. Dilution is prohibited and documentation that the waste has not been impermissibly diluted must be retained; or

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Inspection Procedures - Sections 266.100 and 266.101

Key Considerations:

- Are the waste and the unit subject to the requirements of this part?

- If the facility is claiming a conditional exemption as a smelting, melting, or refining furnace (not including lead or nickel-chromium recovery furnaces or metal recovery furnaces burning baghouse bags used to capture metallic dusts from steel manufacturing), is the owner/operator able to provide:

  (1) A one-time written notification to the Director?

  (2) Records of hazardous waste sampling and analysis that demonstrate that:

    (a) The concentration in the waste of organic compounds listed in Part 261, Appendix VIII does not exceed 500 ppm as-fired, and
    (b) The waste displays a heating value of less than 5,000 Btu per pound as fired?

  (3) Documentation that blending for dilution to meet the above criteria has not occurred? (Only bona fide treatment that moves or destroys organic constituents is permissible.)

  (4) Records for compliance with this section maintained on-site for at least three years?

- If the facility is claiming a conditional exemption as a lead or nickel-chromium recovery furnace or a metal recovery furnace burning baghouse bags used to capture metallic dusts emitted by steel manufacturing, is the owner/operator able to show compliance with the following:

  (1) Provision of a one-time notification to the Director?

  (2) The hazardous wastes are listed in Appendix XI and XII of Part 266 or are baghouse bags used to capture metallic dusts from steel manufacturing?

  (3) The hazardous waste contains recoverable amounts of metals?

  (4) The hazardous waste does not display the TC for any organic constituents?

  (5) The hazardous waste is not listed in Part 261 Appendix VII for the presence of organic constituents?

  (6) Certification that the hazardous waste is being burned in accordance with §266.100(c)(3)?

- If the facility is claiming a conditional exemption as a furnace engaged in precious metals reclamation, is the owner/operator able to show compliance with the following?

  (1) Provision of a one-time notification to the Director?
  (2) Records of hazardous waste sampling and analysis to show that the waste contains economically significant amounts of precious metals?
  (3) Records for compliance with this section maintained on-site for at least three years?

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.100 Applicability (continued)

(ii) The hazardous waste has a heating value of 5,000 Btu/lb or more, as fired, and so is considered a fuel. The heating value of the waste, as generated, may be reduced below the 5,000 Btu/lb limit by bona fide treatment, but may not be diluted to reach the limit. Dilution is prohibited, and documentation that the waste has not been impermissibly diluted must be retained.

(3) Owners/operators of lead or nickel-chromium recovery furnaces or metal recovery furnaces that burn baghouse bags used to capture metallic dusts emitted by steel manufacturing must provide a one-time written notice identifying each hazardous waste burned and specifying whether an exemption for each waste is being claimed under this paragraph or paragraph (c)(1).

(i) To qualify for an exemption the waste must be listed in Appendix XI or XII of this part or be a baghouse bag and it must:

(A) Contain recoverable levels of metals;

(B) Not exhibit the Toxicity Characteristic for any organic constituent;

(C) Not be listed in Part 261, Appendix VII because of an organic constituent; and

(D) Be certified in a one-time notice that the waste will be burned in accordance with (C)(3), and that sampling and analysis will be conducted to ensure at least continued compliance. Records shall be kept for three years.

(d) Standards for direct transfer operations under §266.111 are only applicable to permitted or interim status facilities.

(e) Residue management standards under §266.112 apply to all boilers and industrial furnaces.

(f) Precious metal recovery units are conditionally exempt from regulation under Subpart H except for §266.112. In order to be exempt from §§266.101 through 266.111, an owner/operator must:

(1) Provide a one-time written notice indicating that:

(i) The owner/operator claims exemption under this paragraph;

(ii) The hazardous waste is burned for legitimate recovery of precious metal; and

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.100 Applicability (continued)

(iii) The owner/operator will comply with the sampling, analysis, and recordkeeping requirements of this paragraph;

(2) Using a SW-846 test method, or if none is available in SW-846, the best alternative method available, sample and analyze the hazardous waste as necessary to document that the waste is burned for recovery of economically significant amounts of precious metal; and

(3) Maintain records documenting this claim at the facility for at least three years.

§266.101 Management Prior to Burning

(a) & (b) & (c) Generators, transporters, and storage facilities that manage hazardous waste that is burned in a boiler or industrial furnace prior to burning are subject to full hazardous waste regulation.

(c) (2) On-site boilers or industrial furnaces meeting the criteria in §266.108 for the small quantity burner (SQB) exemption may store hazardous waste and primary fuel mixtures in tanks that feed directly to the burning unit without complying with Subparts A-L of Parts 264 and 265 or with Part 270.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.102 Permit Standards

(a) This section applies to owners/operators of boilers and industrial furnaces that burn hazardous waste for energy recovery which are not operating under interim status and which are not exempt under the small quantity burner exemption. Except as provided in this subpart, subparts A-H and BB of Part 264 are applicable.

(b) Owners/operators must provide hazardous waste analysis using SW-846 methods or alternative methods which meet or exceed the SW-846 performance levels. The methods used must be clearly noted in all compliance documentation.

(c) Owners/operators must comply with emission standards to control organic emissions, particulate matter, metal emissions, and hydrogen chloride and chlorine gas under §§266.104 through 266.107.

(d) (1) The owner/operator may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified in paragraph (e), except in approved trial burns.

(2) Hazardous waste not specified in the permit may not be burned until operating conditions have been specified based on either trial burns or alternative data.

(4) For new BIFs a permit must establish appropriate conditions for each of the applicable requirements of this section, including but not limited to allowable firing rates and operating conditions in paragraph (e), in order to comply with the following standards:

(i) The trial burn may not exceed 720 operating hours and shall include operating requirements most likely to ensure compliance with the emissions standards of §§266.104 through 266.107, unless an extension has been granted by the Director.

(ii) For the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the emissions standards of §§266.104 through 266.107.

(iii) For the period immediately following the trial burn and only for the minimum period to allow analysis, computation and review of the results by the Director, the facility must operate under conditions most likely to ensure compliance with the emissions standards of §§266.104 through 266.107.

(iv) For the remaining duration of the permit, the facility operating requirements must be those demonstrated in the trial burn.

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Inspection Procedures - Section 266.102

Key Considerations:

- Compliance with the following provisions of §264 should be verified:

  -- General (§264.4)
  -- General facility standards (§§264.11-264.18)
  -- Preparedness and prevention (§§264.31-264.37)
  -- Contingency plan and emergency procedures (§§264.51-264.56)
  -- Manifest system, recordkeeping and reporting requirements (§§264.71-264.77)
  -- Corrective action (§§264.90 and 264.101)
  -- Closure and post-closure (§§264.111-264.115)
  -- Financial requirements (§§264.141, 264.142, 264.143, 264.147-264.151) (Note: States and the Federal Government are exempt from Subpart H requirements.)
  -- Subpart BB (except §264.1050(a)).

- The facility's hazardous waste analyses in the Part B permit application (permitted facilities) or trial burn plan (interim status facilities) should be reviewed to ensure that appropriate Appendix VIII constituents have been identified and quantified and explanations provided for the exclusion of constituents.

- Verify through sampling and analysis records that the facility is only burning those wastes specified in its permit.

- Determine whether the time to reach operational readiness exceeded 720 hours.

- If the facility sought a waiver of the trial burn requirements, check to see that the facility's eligibility for this waiver is documented and that there is evidence of the facility's compliance with §§266.104 through 266.107 as an alternative to the trial burn requirements.

- Verify that the actual trial burn operating parameters complied with the facility's trial burn plan. All trial burn requirements should be coordinated with the permit writer.

- Compare the facility's permit standards for metals, CO, HC, organics, HCl, Cl2 and particulate matter emissions with its operating record to verify compliance with these standards.

- Review the operating record for the following monitoring and inspection records:

  -- Feed rates and composition of hazardous waste, other fuels and industrial furnace feedstocks and feed rates of ash, metals, and total chloride and chlorine;

  -- If specified by the permit, carbon monoxide, hydrocarbons and oxygen on a continuous basis at a common point in the boiler or industrial furnace downstream of the combustion zone and prior to release of stack gases to the atmosphere in accordance with operating requirements;

  -- Sampling and analysis of the hazardous waste, residues and exhaust emissions; and

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.102 Permit Standards (continued)

(e) (1) A boiler or industrial furnace must be operated in accordance with the standards specified in the permit at all times that hazardous waste is in the unit. The operating requirements must include the following in (2) through (11) below:

(2) (i,ii, iii) Requirements to ensure compliance with the organic emissions standards for DRE standard, carbon monoxide and hydrocarbon standards, and start-up and shut-down of the boiler or industrial furnace.

(3) Requirements to ensure conformance with the particulate standards.

(4) Requirements to ensure conformance with the metals emissions standards.

(5) Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards.

(6) Requirements for measuring parameters and establishing limits based on trial burn data.

(7) General operating requirements for fugitive emissions, automatic waste feed cutoff and changes in combustion properties or feed rates of the hazardous waste.

(8) (i) Owners/operators must monitor and record the following, at a minimum, while burning hazardous waste:

(A) If specified by the permit, feed rates and composition of hazardous waste, other fuels and industrial furnace feedstocks and feed rates of ash, metals, and total chloride and chlorine.

(B) If specified by the permit, carbon monoxide, hydrocarbons and oxygen on a continuous basis.

(C) If requested by the Director, sampling and analysis of the hazardous waste, residues and exhaust emissions.

(ii) All monitors shall record data in units corresponding to the permit limit, unless otherwise specified in the permit.

(iii) The boiler or industrial furnace and associated equipment, when they contain hazardous waste, must be subjected to thorough visual inspection at least daily for leaks, spills, fugitive emissions, and signs of tampering.

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Inspection Procedures - Section 266.102 (continued)

-- Evidence of weekly testing of the automatic hazardous waste feed cutoff system and associated alarms when hazardous waste is burned.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.102 Permit Standards (continued)

(iv) The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every seven days, when hazardous waste is burned, to verify operability, unless the applicant demonstrates to the Director that weekly inspection will unduly restrict operation. At a minimum, operational testing must be conducted at least once every thirty days.

(v) Monitoring and inspection records required under §266.102(e)(8) must be kept in the operating record.

(9) Direct transfer from a transport vehicle to a burner must be in compliance with §266.111.

(10) Owners/operators must keep in the operating record all information and data until closure of the facility.

(11) All hazardous waste and hazardous waste residues must be removed from a boiler and industrial furnace at closure.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.103 Interim Status Standards

(a) (1) (ii) An "existing" or "in existence" boiler or industrial furnace is one that is either in operation burning or processing hazardous waste or one for which construction has commenced on or before August 21, 1991.

(iii) If a boiler or industrial furnace is located at a facility that already has a permit or attained interim status, the facility must comply with the applicable regulations for permit modifications under §270.42 or changes in interim status in §270.72.

(2) The requirements of this section do not apply to hazardous waste and facilities operating boilers and industrial furnaces which are exempt under §§266.100(b), (c), or (f), or 266.108.

(3) Interim status facilities may not burn hazardous listed wastes F020, F021, F022, F023, F026, or F027 or wastes derived from them.

(4) Except as provided in this subpart, subparts A-H and BB of part 265 are applicable to owners/operators of boilers and industrial furnaces.

(5) Special controls specified apply to furnaces that feed hazardous waste for a purpose other than solely as an ingredient at any location other than the hot end where products are normally discharged or where fuels are normally fired.

(6) Prior to certification of compliance, owners/operators shall not feed hazardous waste in a boiler or industrial furnace that has a heating value less than 5,000 Btu/lb as-generated (except that the heating value of a waste as-generated may be increased to above the 5,000 Btu/lb limit by bona fide treatment; blending is not bona fide treatment in this case; records must be kept to document that no impermissible dilution has occurred), except under the following circumstances:

(i) When burning waste solely as an ingredient;

(ii) When burning for compliance testing for a period not to exceed 720 hours;

(iii) When prior to August 21, 1991, the boiler or industrial furnace was operating under interim status standards for incinerators (Part 265, Subpart O) or interim status standards for thermal treatment units (Part 265, Subpart P); or

(iv) When burning in a halogen acid furnace if the waste was burned as an excluded ingredient under §261.2(e) prior to February 21, 1991 and documentation of this claim is kept on file.

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Inspection Procedures - Section 266.103

Key Considerations:

- Does the facility meet the definition of "existing" or "in existence"?

  -- Was the facility in operation burning or processing hazardous waste on or before August 21, 1991?
  -or-
  -- Had construction of the facility commenced on or before August 21, 1991, as defined in §260.10?

- Has an interim status facility complied with the prohibition against burning listed dioxin or dioxin-derived wastes?

- Did the facility meet the August 21, 1991 deadline for certification of precompliance and does the certification contain the required information as specified in 266.103(b)(2) including a statement of precompliance signed by the o/o?

- If the facility has conducted a compliance test, did the facility submit a certification of compliance within ninety days of completing the test? Verify the facility's compliance with the operating parameters it established during the compliance test.

- If the facility did not submit a complete certification of compliance by August 21, 1992, does the operating record reflect compliance with one of the options provided in §266.103(c)(7)?

- Has the facility submitted a revised certification of compliance? If so, the operating record should reflect compliance with §266.103(c)(8).

- Do all burning devices have an automatic waste feed cutoff system? Are fugitive emissions from the combustion zone being controlled?

Verify compliance with the following provisions of §265:
- General (§265.4)
- General facility standards (§§265.11-265.17)
- Preparedness and prevention (§§265.31-265.37)
- Contingency plan and emergency procedures (§§265.51-265.56)
- Manifest system, recordkeeping and reporting requirements in §§265.71-265.77 <u>except</u> §§265.71,265.72 and 265.76 do not apply to owners/operators of on-site facilities that do not receive any hazardous waste from off-site sources
- Closure and post-closure (§§265.111-265.115)
- Financial requirements (§§265.141, 265.142, 265.143, and 265.147-265.151)
- Subpart BB (except §265.1050(a)).

- **<u>Remember:</u>** Review the hazardous waste sampling and analysis records to determine if the waste is being burned for a purpose other than solely as an ingredient. If so, the special requirements of §266.103(a)(5) apply.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.103 Interim Status Standards (continued)

(7) Direct transfer of wastes from a transport vehicle to a boiler or industrial furnace must meet the criteria of §266.111.

(b) (1) Owners/operators must submit certification of precompliance to the Director on or before August 21, 1991. This certification must demonstrate that emissions of particulate matter, metals, HCl, and Cl2 are not likely to exceed any applicable limits provided in §§266.105, 266.106, and 266.107. Owners/operators may burn hazardous waste only under the operating conditions established in the certification of precompliance.

(2) Owners/operators must supply the general facility information in the certification of precompliance.

(3) Owners/operators must establish the following limits on operating conditions: feed rate of hazardous waste, metals, chlorine and chloride in total feed streams; total feed rate of ash in total feed streams; and maximum production rate of the device.

(4) Furnaces which recycle particulate matter and which will certify compliance with metals emissions must comply with special operating requirements in in Appendix IX in"Alternative Methodology For Implementing Metals Controls."

(5) (i) Owners/operators may choose either the instantaneous or hourly rolling average limit methods for measurement of feed rates and production rate.

(ii) Owners/operators may establish feed rate limits for carcinogenic metals and lead on an hourly rolling average basis.

(iii) Feed rate limits for metals, total chlorine and chloride and ash are established and monitored by knowing the substance in each feed stream and the flow rate of the feed stream.

(6) Owners/operators must have submitted a public notice of precompliance in a major local newspaper on or before August 21, 1991.

(7) Operating parameters listed in paragraphs (c)(1)(v) through (viii) shall be continuously monitored and records shall be maintained in the operating record as appropriate.

(8) Owners/operators may revise the certification of precompliance by submitting a revised certification; the facility must operate within the original operating parameters until a revised certification is submitted or a certification of compliance is submitted. The public notice requirements of paragraph (b)(6) do not apply to recertifications.

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Inspection Procedures - Section 266.103 (continued)

- If the facility's boiler or industrial furnace does not meet the exemption criteria of §266.103(a)(6)(i-iv), review the operating record to verify that:

  1) All hazardous waste fed into the boiler or industrial furnace has an as-generated heating value of greater than 5,000 Btu/lb; and

  2) If the waste has been treated to increase the waste's heating value, this treatment is bona fide and records documenting that no impermissible dilution has occurred are kept.

- Verify that the facility provided public notice of precompliance on or before August 21, 1991, <u>including</u> locations where the record for the facility can be viewed and copied.

- The facility must maintain a BIF Correspondence File on-site containing all correspondence between the facility and the Director and State and local regulatory officials, including:

  1) Copies of all certifications and notifications;

  2) Time extension requests and approvals or denials;

  3) Enforcement notifications of violations; and

  4) Copies of EPA and State site-visit reports submitted to the owner/operator.

- Verify that the facility has completed recertification every three years.

- Review the operating record for evidence of the facility's continuous monitoring of its required operating parameters, including the following:

  - Total hazardous waste feed rate

  - Total feed rates of metals, hydrogen chloride, chlorine gas, and ash

  - Carbon monoxide concentration and, where required, hydrocarbon concentration in stack gas

  - Maximum production rate

  - Maximum combustion chamber temperature

  - Maximum flue gas temperature

  - Operating requirements for pollution control devices including wet scrubbors, venturi scrubbers, dry scrubbers, wet ionizing scrubbers, and fabric filters.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.103 Interim Status Standards (continued)

(9) Owners/operators shall include a statement of precompliance, as specified in this paragraph, in the certification of precompliance.

(c) Owners/operators shall conduct emissions testing to document compliance with emissions standards. On or before August 21, 1992, the owner/operator shall submit a certification of compliance establishing limits on the operating parameters.

(1) The boiler or industrial furnace must be operated in accordance with the operating limits and emissions standards established during the compliance test until an operating permit is issued.

(2) At least thirty days before compliance testing will be conducted, owners/operators must notify the Director.

(3) (i) Compliance testing must be conducted under conditions for which the owner/operator has submitted a certification of precompliance and under conditions established in the notification of compliance testing. The owner/operator may seek approval on a case by case basis to use compliance test data from one unit in lieu of testing a similar on-site unit if the supporting information, required under paragraph (c)(2) of this section, is provided to the Director.

(ii) Facilities operating industrial furnaces that recycle particulate matter from the air pollution control system must comply with procedures to determine compliance with metal standards.

(iii) If compliance with emissions standards is not demonstrated during a set of test runs, an additional set of test runs shall be conducted under operating conditions as close as possible to the original operating conditions.

(4) Owners/operators must certify compliance within ninety days of completing compliance testing.

(5) If an owner/operator must comply with hydrocarbon controls, a conditioned gas monitoring system may be used, provided that the owner/operator submits a certification of compliance without using extensions of time.

(6) Industrial furnaces recycling collected particulate matter must comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" or paragraph (c)(3)(ii)(B).

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.103 Interim Status Standards (continued)

(7) (i) If certification of compliance is not submitted by August 21, 1992, the owner/operator must do one of the following:

(A) Stop burning hazardous waste and begin closure for the hazardous waste portion of the facility;

(B) Limit hazardous waste burning for purposes of compliance testing to a total period of 720 hours beginning August 21, 1992, submit notification by August 21, 1992 that the facility is operating under restricted interim status and that it intends to resume burning of hazardous waste, and submit a certification of compliance by August 23, 1993;

(C) Obtain a case-by-case extension under (c)(7)(ii).

(8) A revised certification of compliance may be submitted at any time. Test burning at operating limits exceeding those in the original certification for recertification purposes may not exceed a period of 720 hours. The facility must submit the revised certification at least 30 days prior to operating at limits which exceed those established in the original certification.

(d) Recertification shall occur every three years.

(e) If the owner/operator does not comply with the interim status compliance schedule, including certification of precompliance, certification of compliance, and recertification, hazardous waste burning must cease on the date that the deadline is missed. Closure activities must begin and hazardous waste burning may not resume except under an operating permit. The "known volume of hazardous waste" has been received on the date that the deadline is missed.

(f) Hazardous waste (except waste fed solely as an ingredient under the Tier I feed rate screening limits) shall not be fed into a device during start-up or shut-down operations unless the device is operating within the operating conditions in the certification of compliance.

(g) Boilers and industrial furnaces must be equipped with automatic waste feed cutoff systems.

(h) Fugitive emissions from the combustion zone must be controlled.

(i) Hazardous waste burning must cease when changes in combustion properties, feed rates, or boiler or industrial furnace design or operating conditions occur.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.103 Interim Status Standards (continued)

(j) (1) Owners/operators must monitor the following:

-- Feed rates and composition of hazardous waste, fuels, and feedstocks;

-- Carbon monoxide, oxygen and hydrocarbons; and

-- Upon request of the Director, sample and analyze the hazardous waste and stack gas emissions.

(2) At least daily, the owner/operator must conduct visual inspections of the BIF and associated equipment, looking for leaks, spills, fugitive emissions, and tampering.

(3) The automatic feed cutoff system and associated alarms must be tested at least every seven days when hazardous waste is burned, to verify operability unless the testing will unduly restrict or upset operations. If less frequent testing is conducted, support for the demonstration of adequacy must be included in the operating record.

(4) The above monitoring and inspection records must be kept in the operating log.

(k) All compliance documentation must be kept in the facility operating record until closure of the boiler or industrial furnace.

(l) All hazardous waste and hazardous waste residues must be removed from the boiler or industrial furnace at closure, and the owner/operator must comply with §§265.111-265.115.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.104 Standards to Control Organic Emissions

(a) (1) Except as provided in paragraph (a)(3) below, a destruction and removal efficiency (DRE) of 99.99% must be achieved; this standard must be achieved during a trial burn for each designated principal organic hazardous constituent.

(3) A DRE of 99.9999% for each POHC must be achieved when burning waste containing or derived from F020, F021, F022, F023, F026, or F027, and the DRE must be demonstrated on POHCs that are more difficult to burn than dioxins. The Director must be notified of a facility's intent to burn dioxin-listed wastes.

(4) Owners/operators under §266.110 are considered to be in compliance with the DRE standards and are exempt from the DRE trial burn requirement.

(5) Owners/operators under §266.109 are considered to be in compliance with the DRE standards and are exempt from the DRE trial burn.

(b) (1) The stack gas concentration of carbon monoxide cannot exceed 100 ppmv on an hourly rolling average basis, corrected to 7% oxygen except as provided in (c);

(2) CO monitored in conformance with Appendix IX;

(3) Compliance with this standard must be demonstrated during the trial burn or the compliance test.

(c) The stack gas concentration of carbon monoxide from a boiler or industrial furnace may exceed the 100 ppmv limited provided that stack gas concentration of hydrocarbons does not exceed 20 ppmv, except as provided by paragraph (f) below.

(d) Owners/operators of industrial furnaces that feed hazardous waste for a purpose other than solely as an ingredient at any location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon limits irrespective of whether the stack gas CO concentrations meet the 100 ppmv limit.

(e) For boilers and industrial furnaces with dry particulate matter control devices operating within the temperature range of 450-750, the dioxin and furan emissions may not exceed an increased lifetime cancer risk to the maximum exposed individual of 1 in 100,000.

(f) For industrial furnaces that cannot meet the 20 ppmv hydrocarbon limit because of organic matter in normal raw material, the Director may establish an alternative hydrocarbon limit provided the conditions in this paragraph are met.

(g) Cement kilns may comply with the carbon monoxide and hydrocarbon limits provided by paragraphs (b), (c), and (d) of this section by monitoring in the by-pass duct, provided that conditions in this paragraph are met.

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Inspection Procedures - Sections 266.104 and 266.105

Remember:

- Verify compliance with the organic emissions standards for destruction and removal efficiency and carbon monoxide according to either the permitted or interim status requirements as discussed in the previous section.
- Verify compliance with the particulate matter standards.

Compliance with Destruction and Removal Efficiency Standards (§266.104(a))

	General	Dioxins
Standard	99.99%	99.9999%
Compliance Requirements	Demonstrated during trial burn for each principal organic hazardous constituent designated in the permit for each waste stream (for permitted facilities only).	Must notify Director of intent to burn hazardous wastes F020, F021, F022, F023, F026, or F027. DRE must be demonstrated on a more difficult to burn POHC. Additional Requirement: BIFs with particulate matter control devices operating in the temperature range of 450° - 750° F and industrial furnaces operating under an alternative hydrocarbon limit must conduct stack testing and site-specific dispersion modeling to demonstrate that the estimated increased lifetime cancer risk to the MEI is less than one in 100,000.
Exemptions	Boilers operating under §266.110 or Boilers and Industrial Furnaces operating under §266.109(a) are exempt from the DRE Trial Burn	

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.104 Standards to Control Organic Emissions (continued)

(h) Compliance with the requirements of this section must be demonstrated simultaneously by emission testing or during separate runs under identical operating conditions.

(i) For purposes of permit enforcement, compliance with the operating requirements will be regarded as compliance with this section.

§266.105 Standards to Control Particulate Matter

(a) Boilers or industrial furnaces may not emit particulate matter in excess of 180 milligrams per dry standard cubic meter after correction to a stack gas concentration of 7% oxygen.

(b) Owners/operators meeting the requirements of §266.109(b) for the low risk waste exemption are exempt from the particulate matter standard.

(c) For purposes of permit enforcement, compliance with the operating requirements will be regarded as compliance with this section.

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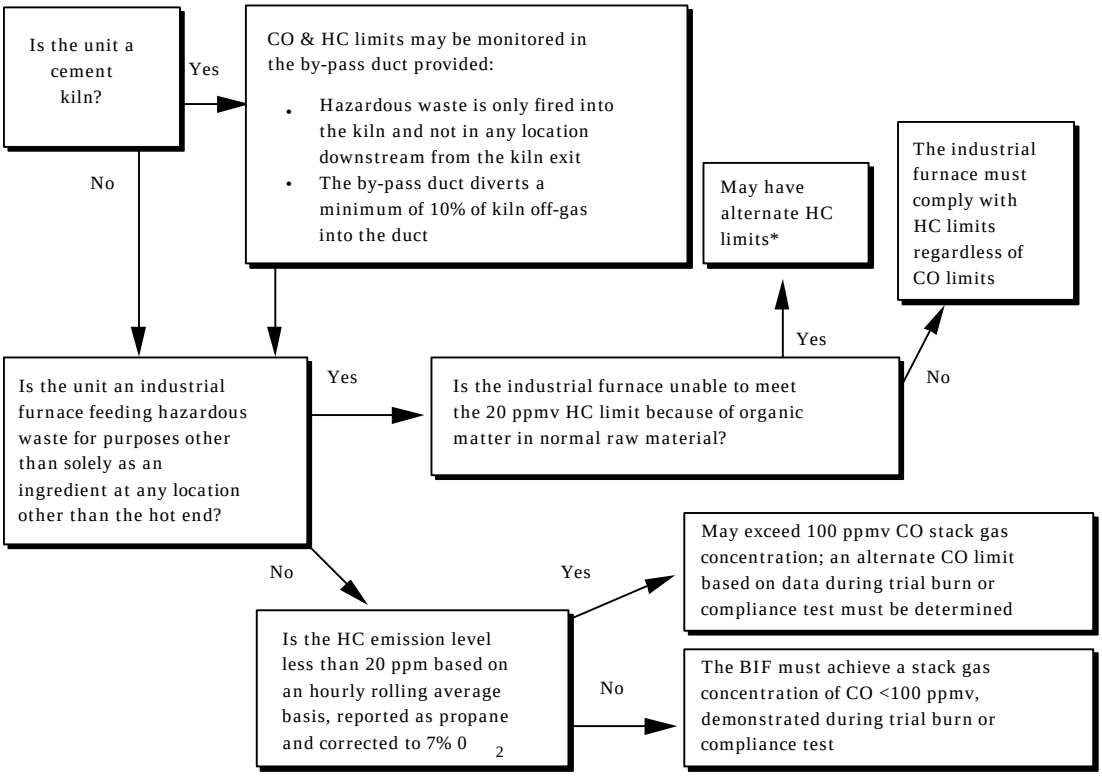
Inspection Procedures - Sections 266.104 and 266.105 (continued)

Compliance with CO and HC Emissions Standards



**Cement kilns monitoring CO and HC in by-pass duct are not eligible for the alternate HC limit.*

Compliance with Particulate Matter Standards (§266.105)

Emissions Standard:	Less than or equal to 180 mg/dscm (.08 gr/dscf) after correction to 7% O_2
Test Method:	• 40 CFR 60 Appendix A, Methods 1 through 5 • Appendix IX §266
Exempt Facilities:	Facilities meeting low-risk waste exemption under §266.109(6)

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.106 Standards to Control Metals Emissions

(a) Owners/operators must comply with metal standards provided by paragraphs (b), (c), (d), (e), or (f) below for each metal listed in paragraph (b).

(b) Tier I owners/operators must comply with the feed rate screening limits in Appendix I as a function of terrain-adjusted effective stack height, terrain, and land use in the vicinity of the facility.

(6) Multiple stack facilities must assume all hazardous waste is fed into the worse-case stack based on dispersion characteristics.

(7) If any criteria in (b)(7) are met, the Tier I and Tier II limits do not apply, the owner/operator must comply with Tier III or the adjusted Tier I screening limits provided in (e).

(8) The feed rate of metals in each stream must be monitored to ensure that feed rate limits are not exceeded.

(c) Tier II owners/operators must comply with the emission rate screening limits in Appendix I as a function of terrain-adjusted effective stack height, terrain, and land use in the vicinity of the facility.

(5) Multiple stack facilities must assume all hazardous waste is fed into the worse-case stack based on dispersion characteristics.

(d) Tier III or Adjusted Tier I owners/operators must control metals emissions through emissions testing, air dispersion modeling to predict the maximum annual average off-site ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.

(5) Multiple stack facilities (except Adjusted Tier I facilities) must conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels.

(6) The feed rate of metals in each feed stream must be monitored to ensure that the feed rate limits for the feed streams specified under §§266.102 or 266.103 are not exceeded.

(e) Owners/operators may adjust the feed rate screening limits provided by Appendix I to account for site-specific dispersion modeling.

(f) The Director may approve approaches to implement the Tier II or Tier III metal emission limits provided by paragraphs (c) or (d) as alternatives to monitoring the feed rate of metals in each feed stream.

(i) For purposes of permit enforcement, compliance with the operating requirements will be regarded as compliance with this section.

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Inspection Procedures - Sections 266.106 and 266.107

Summary of Options for Compliance with Metal Emissions Standards (§266.106)

	Tier I (§266.106(b))	Tier II (§266.106(c))	Tier III (§266.106(d))
Compliance by:	Feed rate screening	Emissions testing	Emissions testing
Standards based on:	• Sampling and analysis • Flow rate monitoring of each feed stream	• Terrain-adjusted effective stack height • Land use • Worst-case dispersion scenarios	Allowances for partitioning of metals, removal of metals by air pollution control system, site-specific dispersion modelling
Ineligible facilities:	Those with dispersion characteristics which provide worse dispersion than those used to calculate screening limits	Those with dispersion characteristics which provide worse dispersion than those used to calculate screening limits	None

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.107 Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas (Cl2) Emissions

(a) Owners/operators must comply with HCl and Cl2 controls set forth in paragraphs (b), (c), or (e) below.

(b) (1) Tier I operators must comply with the feed rate screening limits in Appendix II as function of terrain-adjusted effective stack height, terrain, and land use in the vicinity of the facility.

(2) Tier II operators must comply with the feed rate screening limits in Appendix II as function of terrain-adjusted effective stack height, terrain, and land use in the vicinity of the facility.

(4) Owners/operators of facilities with more than one on-site stack from a unit subject to HCl or Cl2 emissions must comply with the Tier I and Tier II screening limits for those stacks assuming that all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(ii) Under Tier I the total feed rate of chlorine and chloride to all devices subject to these controls shall not exceed the screening limit for the worst-case stack.

(iii) Under Tier II the total emissions of HCl and Cl2 from all stacks subject to these controls shall not exceed the screening limit for the worst-case stack.

(c) Tier III owners/operators must demonstrate compliance by emissions testing to determine the emission rate for HCl and Cl2, air dispersion modeling to predict the maximum annual average off-site ground level concentration for each compound, and a demonstration that acceptable ambient levels are not exceeded.

(3) Owners/operators of facilities with more than one on-site stack from a device subject to controls on HCl or Cl2 emissions must conduct emissions testing and dispersion modeling to demonstrate that the aggregate emissions from all such on-site stacks do not result in an exceedance of the acceptable ambient levels for HCl and Cl2.

(e) Owners/operators complying with the Tier I feed rate screening limits may adjust these limits to account for site-specific dispersion modeling. The adjusted feed rate limits are established by back-calculating from the acceptable ambient level for Cl2 using dispersion modeling to determine the maximum allowable emission rate.

(h) Compliance with the operating requirements specified in a facility's permit will be regarded as compliance with this section. A permit may be modified, revoked or re-issued if the operating parameters specified in the permit are insufficient to ensure compliance with this section.

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Inspection Procedures - Sections 266.106 and 266.107 (continued)

Remember:

- Verify compliance with the metals emissions standards according to either permitted conditions or interim status requirements discussed in previous sections.
- Verify compliance with the hydrochloric acid and chlorine gas emissions standards according to permitted or interim status requirements.

Compliance with HCI and C12 Emissions (§266.107)

	Tier I	Tier II	Tier III
Compliance by:	Feed rate screening limits for total chlorine	Emission rate screening limits for HCl and Cl_2 during trial burn/ compliance test	• Emissions testing • Air dispersion modelling • Demonstration that acceptable ambient levels have not been exceeded during trial burn/ compliance test
Standards based on:	• Terrain adjusted effective stack height • Terrain and land use in vicinity of the facility	• Terrain adjusted effective stack height • Terrain and land use in vicinity of the facility	Predicted maximum annual average off-site ground level concentration for each compound
Parameters:	Feed rate of total chlorine and chloride (organic and inorganic) in all feed streams must not exceed levels in Appendix II	Stack emission rates shall not exceed Appendix III levels	May not exceed acceptable ambient levels
Multiple Stacks:	Feed rate of total chlorine and chloride (organic and inorganic) in all feed streams must not exceed levels in Appendix II	Stack emission rates shall not exceed Appendix III levels	Aggregate emissions from on-site stacks do not exceed acceptable ambient levels

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.108 Small Quantity On-Site Burner Exemption

(a) SQBs that burn hazardous waste on-site in boilers or industrial furnaces are exempt from the emissions standards for boilers and industrial furnaces if the following requirements are met:

(1) The quantity of hazardous waste burned for a calendar month does not exceed the limits provided in the §266.108 table based on the terrain-adjusted effective stack height;

(2) The hazardous waste firing rate does not exceed at any time 1 percent of the total fuel requirement for the device on a total heat input or mass input basis, whichever results in the lower mass feed rate of hazardous waste;

(3) The hazardous waste has a minimum heating value of 5,000 Btu/lb as generated; and

(4) The hazardous waste fuel does not contain and is not derived from F020, F021, F022, F023, F026, or F027.

(b) If a hazardous and non-hazardous waste is mixed, the quantity of hazardous waste before mixing is used for quantity determinations in paragraph (a).

(c) If an owner/operator burns hazardous waste in more than one on-site boiler or industrial furnace, quantity limits are calculated by the equation in this paragraph.

(d) SQBs must provide a one-time written notification of burning activities to the EPA.

(e) Owners/operators must maintain documentation of the facility's eligibility for this exemption for at least three years. At a minimum, these records must include the quantity of hazardous waste and other fuel burned per month, and the heating value of the hazardous waste.

§266.109 Low-Risk Waste Exemption

(a) (1) The DRE standard of §266.104(a) does not apply if the BIF is operated under the following conditions:

(i) The fuel burned is at minimum 50% fossil fuels, fuels derived from fossil fuels, tall oils, or, if approved by the Director, other nonhazardous fuel; the 50% primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

(ii) The fuels have a minimum as-fired heating value of 8,000 Btu/lb.;

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Inspection Procedures - Sections 266.108, 266.109, and 266.110

Remember:

- If the facility is claiming a SQB exemption, check the operating record to verify that the quantity of waste burned at the facility in a month does not exceed the levels provided in the table in §266.108 and that the boiler or industrial furnace is operated within the parameters specified for small quantity burners.
- Check whether the facility submitted a one-time notification to the Director.
- Check sampling and analysis records to verify minimum Btu value of waste.
- Records documenting compliance with §266.108 should have been kept on-site for a minimum of three years.
- Verify that a facility claiming a low-risk waste exemption or a waiver of the DRE trial burn requirement has met the criteria for these exemptions.
- If an owner/operator of a boiler is claiming a waiver of the DRE trial burn requirements, confirm through inspection of the operating record that the facility has met the requirements of §266.110.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.109 Low-Risk Waste Exemption (continued)

(iii) The hazardous waste is fired directly into the primary fuel flame zone; and

(iv) The device complies with the CO emissions standards.

(2) The owner/operator must demonstrate that the hazardous waste burning will not pose unacceptable adverse risk to the public using one of these procedures: calculating reasonable, worst case emission rates; using emission dispersion modeling; and predicting the maximum annual average ground level concentration of the constituent.

(b) The particulate matter standard of §266.105 may be waived if the DRE standard of paragraph (a) is waived and the owner/operator is complying with Tier I or adjusted Tier I metals feed rate screening limits.

§266.110 Waiver of DRE Trial Burn for Boilers

Boilers that operate under the requirements of this section, and do not burn F020, F021, F022, F023, F026, or F027 waste, or waste derived therefrom, are considered to be in conformance with the DRE standard of §266.104(a) and a trial burn to demonstrate DRE is waived if:

(a) A minimum 50% of the fuel fired is fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the Director, other nonhazardous fuel; the 50% primary fuel firing rate shall be determined on a total heat or mass input basis, whichever results in the greater mass feed rate of primary fuel fired;

(b) The boiler load shall not be less than 40 percent;

(c) Primary fuels, hazardous waste fuels, and each material fired in a burner where hazardous waste is fired must have a minimum as-fired heating value of 8,000 Btu/lb;

(d) CO standards of §266.104(b)(1) are met;

(e) The boiler must be a watertube type and stoker or stoker-type mechanism is used;

(f) The hazardous waste is fired directly into the primary fuel flame zone with an air or steam mechanical or rotary cup atomization system.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.111 Standards for Direct Transfer

(a) The regulations in this section apply to owners/operators of boilers and industrial furnaces if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace.

(c) Direct transfer equipment must be operated in a manner which prevents uncontrolled releases of hazardous waste.

(d) Direct transfer areas must be in compliance with §264.175 (containment), §265 Subpart I (containers, except §§265.170 and 265.174); in lieu of the special requirements of §265.176 for ignitable or reactive wastes, the owner/operator may comply with the requirements of §265.198(b) for the maintenance of protective distances between the waste management area and any public ways, streets, alleys or adjacent property line that can be built upon; the owner/operator must obtain and keep on file at the facility a written certification by the local Fire Marshall that the installation meets the subject NFPA codes.

(e) (1) Direct transfer equipment must have secondary containment in compliance with §265.193 except for §§265.193(a),(d),(e),and(i), as follows:

(i) New direct transfer equipment, prior to service.

(ii) Existing direct transfer equipment by August 21, 1993.

(2) (i) For existing direct transfer equipment that does not have secondary containment, the owner/operator shall determine whether it is leaking or unfit for use. A written assessment, reviewed and certified by a qualified, registered professional engineer, shall attest to the integrity by August 21, 1992.

(ii) At minimum, this assessment shall consider: design standards, hazardous characteristics of the waste(s) handled, existing corrosion protection, age or estimate of age, and results of leak testing.

(iii) If the equipment is found to be leaking or unfit for use, the owner/operator shall comply with §§265.196 (a) and (b).

(3) (i, ii) Direct transfer equipment must be inspected at least once each operating hour by the owner/operator while hazardous waste is being transferred: overfill/spill control equipment, aboveground portions of equipment, monitoring and leak detection equipment, and cathodic protection, if used.

(iii) Records of inspection shall be maintained in the operating records and be available for at least three years.

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Inspection Procedures - Sections 266.111 and 266.112

Key Considerations:

- Are the containers that are being used in a direct transfer operation closed? Has the facility met the applicable requirements of Parts 264 and 265, Subparts I and J?

- Does the direct transfer equipment have secondary containment? If the facility's direct transfer equipment was in existence as of August 21, 1991, did it have secondary containment by August 21, 1993?

Verify that by August 21, 1992, the facility had on record a written assessment reviewed and certified by a qualified, registered professional engineer that attests to the existing equipment's integrity. Check for transfer equipment inspection records in the operating record.

Review the facility's closure plan to determine whether it is in compliance with the requirements of §265.197 (except (c)(2) through (c)(4)).

If the owner/operator is claiming an exemption from the management of residues as hazardous waste, verify that the following criteria for boilers, ore or mineral furnaces or cement kilns are met and that the necessary comparisons of waste-derived residues and normal residues have been made using the designated techniques:

1) Boilers are burning at least 50% coal
2) Ore/mineral furnaces: 50% of processed material is non-hazardous raw materials
3) Cement kilns: 50% of feed is normal cement-production raw material.

Review the facility sampling and analysis data to check the concentration of hazardous constituents in waste-derived residue and comparison with normal residue.

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Hazardous Waste Burned in Boilers and Industrial Furnaces (continued)

§266.111 Standards for Direct Transfer (continued)

(4) Direct transfer ancillary equipment must be operated in compliance with section §265.192.

(5) Leak and spill response must be in compliance with §265.196.

(6) Closure must be conducted in compliance with §265.197, except (c)(2) through (c)(4).

§266.112 Regulation of Residues

Residue derived from burning or processing of hazardous waste is not excluded from the definition of hazardous waste under §261.4(b)(4), (7), or (8), unless the following requirements are met:

(a) (1) Boilers must burn at least 50% coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal.

(2) For ore and mineral furnaces, when at least 50% by weight of the processed material is non-hazardous raw materials.

(3) For cement kilns, when at least 50% by weight of the feed is normal cement-production raw materials.

(b) Owners/operators must demonstrate that hazardous waste does not significantly affect residue using either of the criteria below:

(1) Comparison of waste-derived residues with normal residues which demonstrate that no significant differences exist between chemical constituents; or

(2) Comparison of waste-derived residues with health-based limits for metal and non-metal constituents or the level of detection for non-metals, whichever is higher.

(c) (1) & (2) Records sufficient to demonstrate compliance must be retained until closure of the boiler or industrial furnace unit. At a minimum, the following shall be recorded: level of constituents in waste-derived residues; level of constituents in normal residues; and data to determine if changes in raw materials of fuels would reduce toxic constituents of concern in the normal residue.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Applicability and Dilution Prohibition

§268.1 Purpose, Scope and Applicability

(a) This part identifies wastes that are restricted from land disposal and defines those circumstances under which an otherwise prohibited waste may still be land disposed.

(b) The LDR requirements apply to generators, transporters, and owners/operators of TSDFs, except as specifically provided otherwise in Part 268 or Part 261.

(c) The following are cases in which restricted wastes may be land disposed:

(1) Case-by-case extension granted under §268.5 or a national capacity variance.

(2) No-migration petition granted under §268.6.

(3) Disposal of wastes that are hazardous only because they exhibit a characteristic into an injection well regulated under §144.6(a), provided that the wastes disposed do not exhibit a characteristic at the point of injection and that high TOC D001 and D012-D017 wastes are treated first to meet §268.40 standards.

(e) The following wastes are not subject to LDR:

(1) Wastes generated by conditionally exempt small quantity generators (less than or equal to 100 kg of non-acute hazardous waste or less than or equal to 1 kg of acute hazardous waste per month);

(2) Waste pesticides that a farmer disposes of pursuant to §262.70;

(3) Wastes identified or listed after November 8, 1984 for which no treatment standards have been promulgated; and

(4) *De minimis* loses to wastewater treatment systems of commercial chemical products or chemical intermediates that exhibit the characteristic of ignitability (D001), corrosivity (D002), or organic toxicity (D012-D043).

(5) Laboratory wastes displaying the characteristic of ignitability (D001), corrosivity (D002), or organic toxicity (D012-D017), that are commingled with other plant wastewaters under designated circumstances.

§268.3 Dilution Prohibited as a Substitute for Treatment

(a) No one shall in any way dilute a restricted waste, or residual from treatment of a restricted waste, as a substitute for adequate treatment to achieve compliance with Subpart D, to circumvent effective dates, or to circumvent a statutory prohibition under RCRA §3004.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.1 and 268.3

Key Considerations:

- Is the waste a restricted waste at the point of generation? Inspectors should evaluate a waste at the point of generation, and determine if there is any subsequent dilution to meet treatment standards.
- Are wastes being land disposed?
- Do any of the exemptions apply to the waste or have extensions or petitions been granted?
- A determination must be made as to whether dilution has taken place, and if so, whether it was permissible under LDR. According to Part 268, no one shall dilute a restricted waste to avoid an applicable treatment standard under LDR. This was not intended to discourage legitimate centralized treatment. An example of such legitimate treatment is the aggregation of two wastes which will be treated using the same treatment technology. On the other hand, aggregation of waste streams which cannot be treated by the same method is not legitimate treatment and would be considered impermissible dilution.
- Wastes may be impermissibly diluted when treated with a technology to which they are not amenable. Examples include biological treatment or combustion of inorganic metal-bearing hazardous wastes.

The dilution prohibition has led to questions concerning the differences in regulations concerning listed and characteristic waste. The table on the following page is designed to assist in assessing whether or not dilution is permissible. When finalized, the Phase III rule of the Land Disposal Restrictions will place additional restrictions on the dilution of certain characteristic wastes in Clean Water Act (CWA), CWA-equivalent, and Class I Safe Drinking Water Act (SDWA) systems.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Applicability and Dilution Prohibition (continued)

§268.3 Dilution Prohibited as a Substitute for Treatment (continued)

(b) Dilution of wastes that are hazardous only because they exhibit a characteristic in a treatment system which subsequently discharges pursuant to a permit issued under §402 of the CWA; or which performs pretreatment of waste discharged under §307 of the CWA is permissible unless a method of treatment is specified as the treatment standard in §268.42 or unless the waste is D003 reactive cyanide waste.

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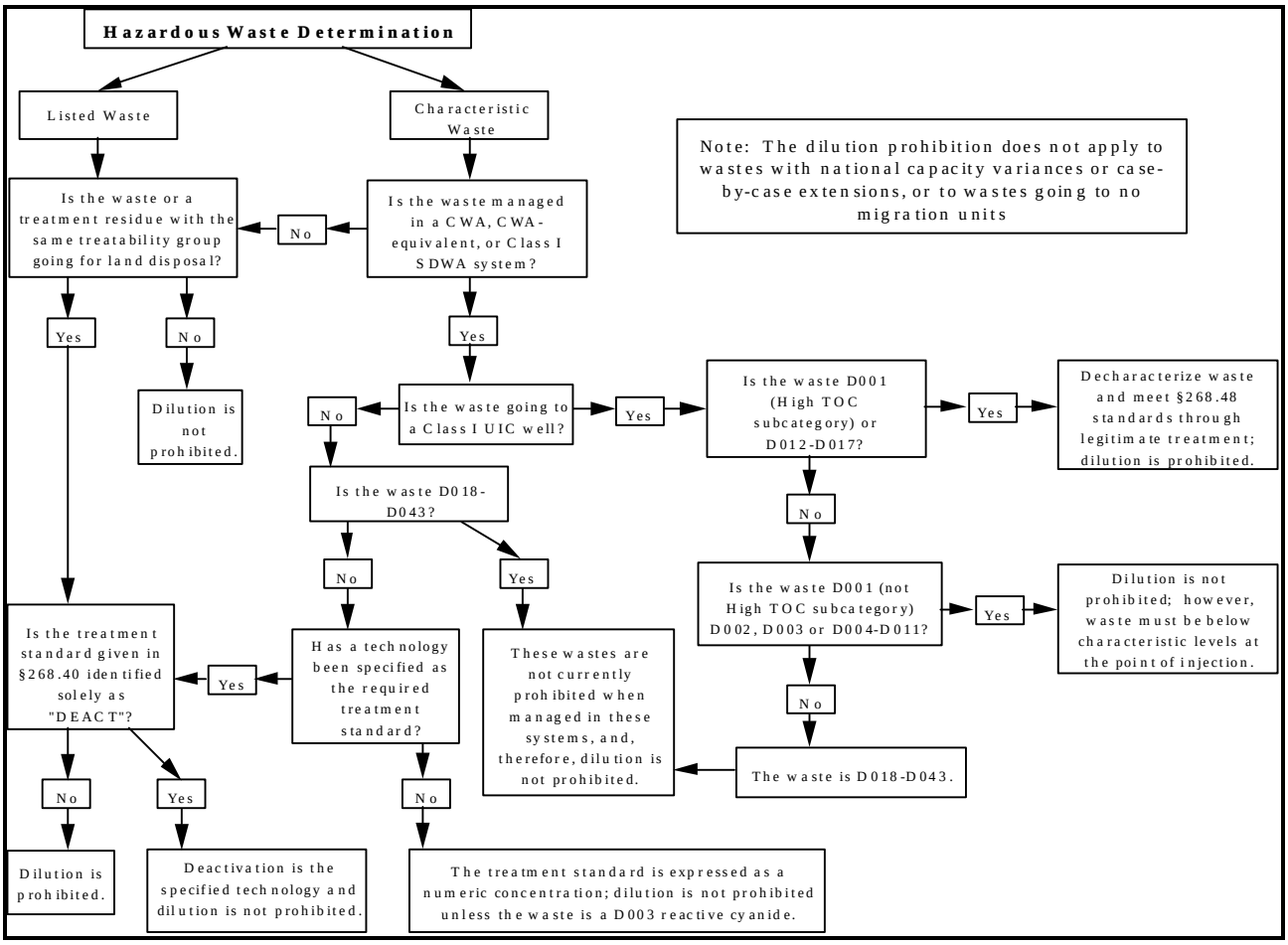
TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.1 and 268.3 (continued)

DILUTION



Dilution Exceptions:

1) Hazardous wastes that are hazardous only because they exhibit a characteristic, and are treated in a treatment system which treats wastes subsequently discharged to a water of the U.S. pursuant to §402 (CWA) or pretreatment under §307 (CWA), unless method of treatment has been specified, or it is a D003 reactive cyanide waste. However, characteristic wastes managed in these systems may become subject to the dilution prohibition following Phase III of the Land Disposal Restrictions.

2) Characteristic hazardous wastes going for Class I deep well injection, as long as the characteristic has been removed prior to injection (§268.1(c)(3)). Even if method of treatment is specified, dilution is allowed; however, High TOC D001 wastes and D012-D017 pesticides must be legitimately treated (i.e., not diluted) to meet §268.40 standards prior to injection. The Phase III rule also may place additional restrictions on the dilution of characteristic wastes prior to injection.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.1 and 268.3 (continued)

3) Dilution does not apply to wastes with a national capacity variance, case-by-case extensions, or to those going to units that have been granted no migration petitions, or to wastes that already meet treatment standards.

4) Aggregation of wastes for centralized treatment is not considered impermissible dilution, if appropriate treatment for the waste is occurring.

5) If a waste is treated and residues are produced that are not going to land disposal, the waste is not a prohibited waste and the dilution prohibition does not apply.

   Note: If a waste is treated and one or more of the residues generated is in the same treatability group as the original waste and these residues are going to be land disposed, both the original wastes and the residues are prohibited wastes and are subject to the dilution prohibition.

- Inspectors should determine if dilution prohibition is applicable at the point of generation (see exemptions above and flowchart following §268.3). The dilution prohibition does not apply to wastes which qualify for a national capacity variance, a case-by-case extension, or a no migration petition. The Phase III rulemaking will establish at what point the dilution prohibition applies to characteristic wastes managed in CWA or SDWA systems.

- Inspectors should examine treatment to determine if it is legitimate. Does centralized treatment involve compatible waste streams?

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Surface Impoundment Exemption

§268.4 Treatment Surface Impoundment Exemption

(a) Wastes which are otherwise prohibited from land disposal under Part 268 may be treated in a surface impoundment provided that:

(a)(1,2) The sampling and testing, removal, subsequent management, and conditions specified in this paragraph are met;

(a)(3) The impoundment meets the requirements of §264.221(c) or §265.221(a) and the ground water monitoring requirements of Subpart F unless:

(i) Exempted pursuant to §264.221 (d) or (e) or §265.221 (c) or (d); or
(ii) Granted a waiver from the Administrator on the basis of the criteria specified in §§268.4(a)(3)(ii)(A)-(C).

(a)(4) The owner/operator certifies compliance in writing to the Regional Administrator for the requirements of paragraphs (a)(2) and (a)(3).

(b) Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under this section.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Section 268.4

Key Considerations:

- Unless specifically exempted, does the unit meet the applicable minimum technical requirements and the ground water monitoring requirements?
- Has the facility complied with the sampling and testing required under the facility's waste analysis plan?
- Are wastes that do not meet applicable treatment standards removed at least annually?
- Has the facility certified compliance and submitted its waste analysis plan?

Remember: Evaporation may not be the principal form of treatment.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Case-by-Case Extensions

§268.5 Procedures for Case-by-Case Extensions to an Effective Date

(a) Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application for an extension to the effective date of any applicable restriction under Part 268 Subpart C, if the specified criteria of §§268.5(a)(1)-(7).

(b) The certification for the application must be signed by an authorized representative.

(d) The extension will only apply to the waste generated at the particular facility covered by the application.

(e) The Administrator may grant an extension of up to one year from the effective date. The Administrator may renew this extension for up to an additional year upon request of the applicant if the required criteria can still be met; no extension under this section will exceed 24 months. The Administrator will give public notice of his action in the Federal Register and provide the opportunity for public comment.

(f) Any person granted an extension must immediately notify the Administrator as soon as he has knowledge of any change in the conditions certified in the application.

(g) Any person granted an extension must submit written progress reports at intervals designated by the Administrator. Such reports must include the overall progress toward constructing or otherwise providing alternative treatment, recovery, or disposal capacity; must identify any delays in development of capacity; and must summarize the steps being taken to mitigate the delay. The Administrator can revoke the extension in accordance with provisions in this paragraph.

(h) Whenever an extension under §268.5 is in effect:

(1) The storage prohibition under §268.50(a) does not apply.

(2) Such hazardous waste may be disposed of only in units that meet the criteria of §268.5(h)(2)(i)-(v).

(i) While awaiting an Agency decision upon an application, the applicant must comply with all restrictions on land disposal once the effective date of the restriction has been reached for the waste.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Section 268.5

Key Considerations:

- Have the procedures established in this Section been followed in making the application?
- Have any of the conditions certified in the application changed, and if so, has notice been given to the Administrator?
- Have the progress reports been submitted at the designated intervals?
- Does the unit meet minimum technical requirements?

Remember: In cases where there is inadequate treatment capacity, EPA may grant a case-by-case extension to the effective date of a prohibition for a specific waste. The extension can be for up to one year, renewable only once, for a total of two years.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

No-Migration Petition

§268.6 Petitions to Allow Land Disposal of a Waste Prohibited Under Subpart C of Part 268

(a) Any person seeking an exemption from a prohibition under Subpart C for a restricted waste must submit a petition to the Administrator demonstrating, to a degree of reasonable certainty, that there will be no migration of hazardous constituents from the disposal unit for as long as the waste remains hazardous. The petition must include all components in paragraphs (a), (b), and (c).

(d) Each petition must be submitted to the Administrator.

(e) After a petition has been approved, the owner/operator must report any changes in conditions at the unit and/or the environment around the unit that significantly depart from the conditions described in the variance and affect the potential for migration of hazardous constituents from the unit in accordance with the criteria set forth in §§268.6(e)(1) and (2).

(f) If the owner/operator determines that there is migration of hazardous constituents from the unit, the owner/operator must:

(1) Immediately suspend receipt of prohibited waste at the unit; and
(2) Notify the Administrator in writing within ten days of the determination that a release has occurred.
(3) The Administrator shall then determine whether or not the facility can continue to accept waste, and whether further examination is needed.

(g) Each petition must include the certification required by this paragraph.

(i) If approved, the petition will apply to the specific waste at the individual disposal unit described in the demonstration.

(j) The Administrator will give public notice of the intent to approve or deny a petition in the Federal Register and provide an opportunity for public comment. The final decision will also be published in the Federal Register.

(k) The term of a petition granted under this section shall be no longer than the term of the RCRA permit of the disposal unit if the unit is operating under a RCRA permit, or up to a maximum of 10 years from the date of approval of a petition if the unit is operating under interim status. In either case the petition will expire when the volume limit has been reached.

(l) Prior to the Administrator's decision, the applicant must comply with all restrictions on land disposal under Part 268 once the effective date for the waste has been reached.

(m) The petition granted under Part 268 does not relieve the petitioner of his responsibility in the management of hazardous waste under 40 CFR Parts 260 through 271.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

(n) Liquid hazardous waste containing PCBs at concentrations greater than or equal to 500 ppm are not eligible for no-migration exemptions.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Section 268.6

Key Considerations:

- Does the petition include the components outlined in §268.6(a)?
- Have §268.6(b) sampling, testing, and analysis criteria been met?
- Has there been any migration of hazardous constituents from the unit?

EPA can grant an exemption if a petitioner can demonstrate, to a reasonable degree of certainty, that such land disposal will not allow migration of hazardous constituents from the disposal unit for as long as the waste remains hazardous.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Generator Certification and Notification

§268.7 Waste Analysis and Recordkeeping

(a) Except as specified in §268.32, if a generator has a listed waste, he must test the waste or test an extract of the waste using the TCLP, or apply knowledge, to determine if the waste is restricted from land disposal under Part 268. Except as provided in §268.32, if a generator has a characteristic waste, the generator must test an extract of the waste using the EP toxicity test, or apply knowledge to determine if the waste is restricted from land disposal under Part 268. If the generator determines his waste exhibits the characteristic of ignitability (D001) (and is not in the High TOC Subcategory or treated by the technology CMBST or RORGS), or the characteristic of corrosivity, as prohibited by §268.37, and/or a characteristic of organic toxicity (D012-D043), as prohibited under §268.38, the generator must determine the underlying hazardous constituents present in the waste.

(1) If a generator is managing a restricted waste that does not meet treatment standards, or exceeds a California list prohibition, with each shipment he must provide written notification that includes the following information:

(1) EPA hazardous waste number;
(ii) For F001-F005, F039, D001, D002, D012-D0043, and wastes prohibited under the California list of §268.32 or RCRA §3004(d), the constituents the treator will monitor, if monitoring will not include all regulated constituents. Wastewater or non-wastewater, and any appropriate subcategory should also be indicated if applicable;
(iii) The manifest number;
(iv) For hazardous debris treated with an alternative technology under §268.45, the contaminants subject to treatment and an indication that they are being treated accordingly; and
(vi) Waste analysis data, where available.

(a) (1) (iii) If a generator is managing a restricted hazardous debris that does not meet treatment standards, but is subject to alternative treatment standards as provided in §268.45(b), he must provide, in writing, notification that “This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45.”

(2) If a generator is managing a restricted waste that meets treatment standards, he must submit the notification and certification required by §268.7(a)(2) indicating that the waste meets all applicable treatment standards. However, generators of hazardous debris that is excluded from the definition of hazardous waste under §261.3(f)(2) are not subject to these notification and certification requirements.

(3) If a generator's waste is subject to a case-by-case extension under §268.5, an exemption under §268.6, or a national capacity variance, he must provide to the TSDF the notice required by §268.7(a)(3), identifying the date the waste will become subject to prohibition.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.7(a)(1) through 268.7(a)(3)

Key Considerations:

- If a generator is managing a restricted waste that does not meet treatment standards, has he provided notification of that fact to the treatment or storage facility?
- If a generator is managing a restricted waste that does meet treatment standards, has he provided notification and certification of that fact to the TSDF?
- If the waste is subject to a variance or an exemption, has the generator still provided the required notification?
- If the generator is treating a restricted waste in accumulation tanks or containers regulated under §262.34, has he done the following, as required:
  - -- developed a waste analysis plan
  - -- filed the plan with the Administrator or authorized State
  - -- complied with §268.7(a)(2) paperwork requirements.
- If the generator applies his knowledge to determine whether a waste is restricted, is the supporting information located in on-site files?
- If a generator is managing a restricted waste subject to treatment for underlying hazardous constituents, has he identified them in the notification?

If a waste does not meet treatment standards in Part 268, Subpart D, generators are only required to provide a notification to the treatment facility. There are some situations, however, where a generator must provide both a notification and a certification that the waste meets treatment standards. This is the case when a generator treats his own waste. Another such situation is when the waste is generated and already meets treatment standards. An example is a spill that generates a U-listed waste and, when the exhumed soil is tested, the constituents are below the concentration levels in the CCW Table set forth in §268.43.

Note: there are varying forms of notification and certification required by paragraphs (a), (b), and (c) of §268.7. An inspector should determine which is applicable to a particular situation.

Section 262.11 states that for purposes of compliance with Part 268, a generator must determine if a listed waste exhibits any characteristics. If the treatment standard specifically addresses the characteristic, then the waste need not be classified in Part 268 paperwork as both listed and characteristic. On the other hand, if the treatment standard for the waste does not specifically address the characteristic, then the waste must be treated for both. Although, underlying hazardous constituents play no role in this determination, they may require additional treatment if present in a characteristic waste managed in a system other than a CWA, CWA-equivalent, or Safe Drinking Water Act System. An example is F005; the treatment standard in §268.41 does not address ignitability. Thus, treatment standards for F005 and D001 must be met if in fact the waste exhibits the characteristic of ignitability.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Generator Certification and Notification (continued)

§268.7 Waste Analysis and Recordkeeping (continued)

(4) If a generator is treating a prohibited waste in accumulation tanks, a containment building, or containers under §262.34 in order to meet LDR treatment standards, the generator must develop a written waste analysis plan that describes the treatment process. (However, generators treating hazardous debris under the alternative standards of §268.45 are not subject to these waste analysis requirements.) This plan must be kept on-site in the generator's records, and the following conditions must be met:

(i) The waste analysis plan must be based on a detailed analysis of a representative sample of the prohibited waste, and include all information necessary to treat the waste, including the selected testing frequency.

(ii) The plan must be filed with the regional EPA or authorized State at least 30 days before beginning the treatment activity.

(iii) Waste shipped off-site must comply with §268.7(a)(2).

(5) If a generator determines that his waste is restricted by applying his knowledge, all supporting information must be kept on-site in the generator's files. If the generator used testing to determine whether the waste is restricted, all waste analysis data also must be retained on-site for five years.

(6) If a generator determines that he is managing a restricted waste that is excluded from the definition of solid waste or is exempt from Subtitle C regulation, under 40 CFR §§261.2-261.6, subsequent to the point of generation, he must place a one-time notice stating such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from Subtitle C regulation, and the disposition of the waste, in the facility's file.

(7) A generator must retain on-site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation for at least five years. This period could be extended in an enforcement action.

(8) If a generator is managing lab packs that do not contain any waste listed in Appendix IV and wishes to use the alternative treatment standard under §268.42, he must submit notification in accordance with §268.7(a)(1), comply with the requirements in §268.7(a)(5) and (a)(6), and submit the required certification signed by an authorized representative.

(9) [reserved].

(10) SQGs with tolling agreements pursuant to 40 CFR 262.20(e) must comply with applicable notification and certification requirements of paragraph (a) of §268.7 for the initial shipment of the waste that is subject to the agreement. Copies of the notification, certification, and the tolling agreement must be retained for a period of at least three years, which is automatically extended in the event of an enforcement action.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.7(a)(4) through 268.7(a)(10)

Key Considerations:

- If the generator is managing a restricted waste that is subsequently excluded from regulation under §§261.2-261.6, has the generator placed a one-time notification in the facility files? An example would be wastes excluded from RCRA regulation when discharged to a POTW regulated under the CWA.

- If the generator is managing lab packs and is using an alternative treatment standard, has he submitted the notification and certification required by §268.7(a)(8) or (a)(9)?

- If the generator is exempted under §262.20, did he provide notification and certification for the initial shipment of waste?

- If using the alternative treatment standard for lab packs, has the generator confirmed the absence of wastes listed in Appendix IV?

See following chart of Generator Recordkeeping and Analysis Requirements.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.7(a)(7) through 268.7(a)(10) Generator Recordkeeping and Analysis Requirements (§268.7)

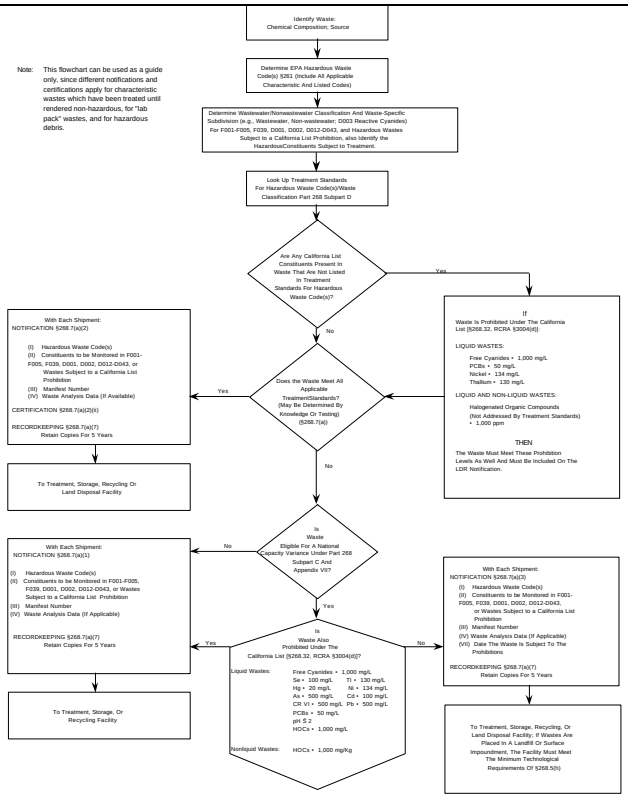

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Treatment and Disposal Facility Certification and Notification

§268.7 Waste Analysis and Recordkeeping (continued)

(b) Treatment facilities must test their waste in accordance with their waste analysis plan. Such testing must be performed as provided in paragraphs (b)(1), (b)(2), and (b)(3) of §268.7.

(4) The notification required by §268.7(b)(4) must be sent to each land disposal facility.

(5) The treatment facility must submit the certification required by §268.7(b)(5) with each shipment of restricted waste to a land disposal facility.

(6) If the waste is going to be further managed at a different facility, the TSDF sending the waste or treatment residue must comply with the notification and certification requirements applicable to generators under §268.7.

(7) Where the wastes are recyclable material used in a manner constituting disposal, instead of notifying the recycling facility, the owner/operator of the recycling facility must submit the certification in §268.7(b)(5) to the Regional Administrator or delegated representative. The recycling facility must keep records of the name and location of the facility that received the waste.

(c) Except where the owner/operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to 40 CFR §266.20(b), the owner/operator of any land disposal facility disposing of any waste subject to Part 268 restrictions must:

(1) Have copies of all notices and certifications specified in paragraph (a) or (b) of §268.7, and certification specified in §268.8 if applicable;

(2) Test the waste or extract of the waste to assure that the wastes or treatment residues are in compliance with the applicable standards. Such testing must be done in accordance with the facility's waste analysis plan.

(d) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under §261.3 are subject to the notification and certification requirements of §268.7(d)(1-3).

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.7(b) through (d)

Key Considerations:

- Has the treatment facility tested its waste in accordance with its waste analysis plan? This testing should be done in accordance with (b)(1), (b)(2), and (b)(3) of §268.7.
- Did the treatment facility send the required notification to each land disposal facility?
- Did the treatment facility submit a notification and certification to the disposal facility that the waste meets applicable treatment standards? If the waste does not meet treatment standards, and the TSDF is sending the waste off-site for further treatment, the TSDF must comply with the notification requirements applicable to generators under §268.7(a).
- Does the owner/operator of a disposal facility have all copies of notifications and certifications specified in paragraphs (a) and (b) of §268.7?
- Has the disposal facility tested the waste or waste extract to determine compliance with treatment standards? This testing must be done in accordance with the facility's waste analysis plan.
- If a generator or treater was the first to claim the debris exempt under §261.3(f), did he provide notice according to §268.7(d)?

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Soft Hammer, Characteristic Waste, and Newly Identified Waste Requirements

§268.8 Landfill and Surface Impoundment Disposal Restrictions

(a) Prior to May 8,1990, wastes which are otherwise prohibited from land disposal may be disposed in a landfill or surface impoundment which is in compliance with the requirements of §268.5(h)(2), provided that the requirements of §268.8(a) are met. As of May 8, 1990, this section is no longer in effect.

§268.9 Special Rules Regarding Wastes That Exhibit a Characteristic

(a) The initial generator of a solid waste must determine each waste code that applies to the waste in order to determine applicable treatment standards under Part 268 Subpart D. If the waste exhibits the characteristic of ignitability (D001) (and is not in the High TOC subcategory or treated by CMBST or RORGS) or the characteristic of corrosivity (D002) as prohibited under §268.37, or displays the characteristic or organic toxicity (D012-D043) prohibited under §268.38, the generator also must identify any underlying hazardous constituents present in the waste.

(b) Where a prohibited waste is both listed under Part 261, Subpart D and exhibits a characteristic under Part 261, Subpart C, the treatment standard for the listed waste code will operate in lieu of the characteristic treatment standard, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

(c) In addition to any applicable standards determined at the initial point of generation, no prohibited waste that exhibits a characteristic may be land disposed unless it meets the applicable treatment standards.

(d) Wastes that exhibit a characteristic are also subject to §268.7 notification requirements, except that once the waste is no longer hazardous, the generator need not provide notice to a Subtitle D facility. In such cases, the required notification and certification specified in §268.9(d) must be placed in the facility's files and a copy sent to the EPA Region or authorized State; however, this notification must be updated if the process or operation generating the waste changes and/or if the Subtitle D facility receiving the waste changes.

§268.13 Schedule for Wastes Identified or Listed After November 8, 1984

(a) In the case of any hazardous waste identified or listed under Section 3001 of RCRA after November 8, 1984, the Administrator shall make a land disposal determination within 6 months after the date of identification or listing.

§268.14 Suface Impoundment Exemptions

(a) Because surface impoundments are land disposal units, wastes managed in them should meet treatment standards unless the surface impoundment is in compliance with §268.4 and meets the minimum technical requirements outlined under §§264.221 or 265.221. However, this section defines additional circumstances under

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

which otherwise prohibited wastes may continue to be placed in surface impoundments.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.8, 268.9, 268.13, and 268.14

Important: Sections 268.8 is no longer in effect. It is included here only for historical purposes — it may be needed to determine past compliance.

If a characteristic waste is rendered non-hazardous and then sent to a Subtitle D facility, the generator must provide the required notification to the EPA Regional Administrator or authorized State. The notification is not required to go to a Subtitle D facility.

If a generator has a mixture that consists of a newly-listed waste for which no treatment standards have been established, and a waste that is currently restricted under Part 268, the inspector should check whether the generator complied with the treatment standards for the restricted waste.

- The Third Third rule (55 FR 22520) established treatment standards for the characteristic waste codes D001-D017. Wastes that exhibit a prohibited characteristic must be treated to meet treatment standards prior to land disposal. Special rules have been established in §268.9 regarding wastes that exhibit a characteristic. Several examples are provided below to illustrate these rules.

- If a waste is listed under both Subpart C (Characteristics of Hazardous Wastes) and Subpart D (Lists of Hazardous Wastes) of 40 CFR Part 261, a determination must be made concerning the following:

  -- If the treatment standard for the waste code listed in Subpart D includes a treatment standard for the constituent that causes the waste to exhibit the characteristic, then the treatment standard for the listed waste (i.e., F, K, P, and U wastes) will operate in lieu of the treatment standard for the characteristic waste code (i.e., D waste).

  For example, if an F006 metal-hydroxide sludge also exhibits the toxicity characteristic for lead (D008), the treatment standard for D008 is not applicable since the F006 treatment standard in Table CCWE includes a standard for lead.

  -- If a listed waste exhibits a characteristic not addressed in the treatment standard in Subpart D of Part 268, the treatment standard established for the characteristic waste code (i.e., D waste) and the treatment standard for the listed waste (i.e., F, K, P, and U waste) must both be met and both waste codes must be identified on applicable LDR paperwork.

  For example, if an F001 spent solvent mixture is contaminated with and exhibits the characteristic for lead (D008), treatment standards for both F001 and D008 are applicable since the F001-F005 treatment standards do not include a standard for lead.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Soft Hammer, Characteristic Waste, and Newly Identified Waste Requirements (continued)

§268.14 Suface Impoundment Exemptions (continued)

(b) Wastes which are newly identified or listed after November 8, 1984 and which are stored in a surface impoundment that is newly subject to Subtitle C as a result of an additional identification or listing may continue to be stored in the unimproved surface impoundment for 48 months after promulgation irrespective or treatment standards so long as the impoundment complies with Subpart F of Part 265 within 12 months of the promulgation of the new characteristic or listing.

(c) Similarly, wastes may continue to be treated in a newly regulated surface impoundment for 48 months following a new identification or listing, so long as Subpart F of Part 265 is met within 12 months. After 48 months, the surface impoundment would need to comply with §268.4.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Sections 268.8, 268.9, 268.13, and 14 (continued)

- Several listed wastes are listed solely due to the presence of a hazardous characteristic (e.g., F003-ignitability). If the characteristic is removed from such a listed waste and the treatment standard for the listed waste is met, it is no longer considered a hazardous waste, and therefore, need not be disposed in a Subtitle C facility. After meeting the treatment standard for the listed waste and removing the characteristic, TSDFs must comply with the appropriate notification and certification requirements under §268.9(d).

- Wastes that are hazardous by characteristic only (i.e., do not meet any of the listings in 40 CFR Part 261 Subpart D) are subject to different LDR requirements once the characteristic is removed:

  -- If a characteristic waste does not meet treatment standards and is being shipped off-site, the notification requirements of §268.7(a)(1) apply, as they do with all other wastes.

  -- If the waste is treated so that it meets the treatment standard <u>and</u> it no longer exhibits that characteristic (and thus is no longer hazardous), the waste may be shipped to a Subtitle D facility. The generator or the treatment facility need not send a §268.7 notification to such a facility; however, a notification and certification containing the following information (see §268.9(d)) must be placed in the facility's files and a copy sent to the EPA Region or authorized State; however, the one-time notification must be updated on an annual basis if the process or operation generating the waste changes and/or if the Subtitle D facility receiving the waste changes.

    - The name and address of the Subtitle D facility receiving the waste shipment.

    - A description of the waste as generated, including EPA hazardous waste code(s), the waste category (e.g., wastewater and nonwastewater), and all underlying hazardous constituents present in D001 and D002 wastes prohibited under §268.37 or D012-D043 wastes prohibited in §268.38.

    - A certification statement that uses the language in §268.7(b)(5)(i), should be signed by an authorized representative and also must accompany the notification. However, the signed certification should carry the language of §268.7(b)(5)(iv) if the waste still requires treatment for underlying hazardous constituents following removal of the hazardous characteristic.

- When the hazardous characteristic is removed prior to disposal or when the waste is excluded from the definition of hazardous or solid waste under §261.2-261.6, the requirements of §268.7(a) still apply. For example, if a characteristic waste is not prohibited because it is discharged from a wastewater treatment system pursuant to a National Pollution Discharge Elimination System (NPDES) permit, some record must still be kept indicating the reason that the waste is not prohibited (i.e., a statement per §268.7(a)(6), indicating that there is no land disposal of this waste prior to the point of exclusion should be in the facility's operating record).

- If a facility treats or stores a newly identified waste in a newly regulated surface impoundment that has yet to comply with §268.4, have they installed groundwater monitoring pursuant to Part 265, Subpart F?

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Prohibition on Land Disposal Schedule

§268.30 Waste Specific Prohibitions-Solvent Wastes

§268.31 Waste Specific Prohibitions-Dioxin-Containing Wastes

§268.32 Waste Specific Prohibitions-California List Wastes

§268.33 Waste Specific Prohibitions-First Third Wastes

§268.34 Waste Specific Prohibitions-Second Third Wastes

§268.35 Waste Specific Prohibitions-Third Third Wastes

§268.36 Waste Specific Prohibitions-Newly Listed Wastes

§268.37 Waste Specific Prohibitions-Ignitable and Corrosive Characteristic Wastes

§268.38 Waste Specific Prohibitions-Newly Identified Organic Toxicity Characteristic Wastes and Newly Listed Coke By-Product and Chlorotoluene Production Wastes

Effective Dates of Waste Codes Listed in Subpart C

(Not Including National Capacity Variances for Mixed Radioactive Waste, and Contaminated Soil and Debris Waste)

(see following pages)

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Subpart C, Sections 268.30 through 268.38

- The California list prohibitions were promulgated on July 7, 1986 and included a list consisting of liquid hazardous wastes containing certain metals, free cyanides, PCBs, corrosives with a PH less than or equal to 2.0, and liquid and nonliquid wastes containing HOCs. In most cases, the California list is superseded by more specific treatment standards. There are four cases, however, when the California list prohibitions may still be applicable:

  -- Liquid hazardous waste containing greater than or equal to 50 ppm PCBs;

  -- Hazardous wastes containing HOCs at concentrations greater than or equal to 1,000 ppm, identified as hazardous by a characteristic property that does not involve HOCs;

  -- Liquid hazardous wastes that exhibit a characteristic and also contain greater than or equal to 134 mg/l of nickel and/or 130 mg/l of thallium; and

  -- Waste that is subject to a national capacity variance if it meets any of the criteria on the California list.

- National capacity variances were established for specific wastes with treatment standards codified in the eight rulemakings that comprise Part 268 Subpart C. For example, the Phase II rule granted one national capacity variance; radioactive soil and debris that exhibit a characteristic of organic toxicity (D018-D043) are not prohibited from land disposal until September 19, 1996 (59 FR 48045; September 19, 1994). Variances can be in effect for up to two years and temporarily extend prohibition effective dates. During a variance, the generator must:

  -- Comply with recordkeeping required under §268.7, including the special notification in §268.7(a)(3);

  -- Determine if the waste meets any of the criteria of the California list prohibitions and, if so, treat it accordingly; and

  -- Dispose of the waste in a minimum technology unit specified in §268.5 if the waste is not treated to meet applicable treatment standards.

- Some prohibitions promulgated in the Third-Third Emergency Rule (58 FR 29860; May 24, 1993) and the Phase II rule (59 FR 47982; September 19, 1994) only apply to wastes managed in non-CWA Act, Non-CWA equivalent and non-SDWA systems. Land disposal prohibitions will not apply to management of certain wastes in those systems until Phase III of the land disposal restrictions is promulgated.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Subpart C, Sections 268.30 through 268.38 (continued)

- Inspectors should be aware that the potential still exists for generators to do the following:
  - -- Misclassify waste
  - -- Impermissibly dilute
  - -- Perform improper waste analysis (TCLP/Total Waste Analysis)
  - -- Perform improper identification of treatability groups.
- Inspectors should be aware that regarding the Phase III Rule, the following are possible non-compliance situations:
  - -- Misidentification or classification
  - -- Impermissible dilution of characteristic waste
  - -- Impermissible dilution of listed waste
  - -- Impermissible dilution of characteristic waste in a centralized treatment system
  - -- Improper designation of treatability groups
  - -- Potential California list waste applicability.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Treatment Standards

§268.40 Applicability of Treatment Standards

(a) Wastes identified in the table "Treatment Standards for Hazardous Wastes" may be land disposed only if they meet the requirements expressed in the table. The table expresses treatment standards as a maximum total concentration for a constituent, as a maximum constituent concentration in an extract of the waste, or as a required treatment technology described in detail at §268.42.

(b) For most wastewaters, compliance with treatment standards is based on maximums for any one day. However, for D004-D011 wastewaters and for all non-wastewaters, compliance is determined by grab samples. Waste for which a technology has been identified may be land disposed following application of the specified technology or following application of a technology deemed equivalent by the Administrator under §268.42(b).

(c) When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue must meet the lowest treatment standard set for the constituent of concern.

(d) When treatment standards for organic constituents are based on combustion in a permitted hazardous waste incinerator, TSDFs operating similar units may demonstrate compliance with the treatment standards if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this section by an order of magnitude. TSDFs utilizing this option should certify compliance pursuant to §268.7(b)(5).

(e) Where treatment standards for D001, D002, and D012-D043 include the phrase "and meet §268.48 standards," all underlying hazardous constituents reasonably expected to be present in these wastes at the point of generation must meet the Universal Treatment Standards, found in §268.48, Table UTS, prior to land disposal.

(f) The treatment standard for F001-F005 non-wastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes which contain only one, two, or three of these constituents. If the waste contains any of these three constituents along with any of the other 25 solvent constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required."

Table *Treatment Standards for Hazardous Wastes*

§268.41 Treatment Standards Expressed as Concentrations in Waste Extract

For the requirements previously found in this section for treatment standards in CWE refer to §268.40.

§268.42 Treatment Standards Expressed as Specified Technologies

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Treatment Standards (continued)

§268.43 Treatment Standards Expressed as Waste Concentrations

For the requirements previously found in this section, and for treatment standards in CCW refer to §268.40.

§268.44 Variance from a Treatment Standard

(a) Where the treatment standard is expressed as a concentration in a waste or waste extract and a waste cannot be treated to the specified level, or where the treatment technology is not appropriate to the waste, the generator or TSDF may petition the Administrator for a variance from the treatment standard. The petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from the wastes analyzed in developing the treatment standard, the waste cannot be treated to specified levels or by the specified methods.

(b) Petitions must be submitted in accordance with the procedures in §260.20.

(c) Each petition must include certification as required by §268.40(c).

(e) The Administrator will give public notice of the intent to approve or deny a petition in the Federal Register and provide the opportunity for public comment.

(f) A generator or TSDF that is managing waste covered by a variance from the treatment standards must comply with the waste analysis requirements under §268.7.

(g) During the review process, the applicant is required to comply with all LDR requirements that are applicable.

(h) Where a treatment standard or technology is not appropriate to the waste, the generator or TSDF may apply for a site-specific variance in accordance with §268.44.

§268.45 Treatment Standards for Hazardous Debris

(a) "In lieu of meeting the standards given in §268.40, hazardous debris may be land disposed following treatment with an appropriate technology as directed by this section. Debris may also be excluded by the Administrator per §261.3(f)(2), if she determines that the debris is no longer contaminated with a hazardous waste.

(b) Hazardous debris must be treated for each “contaminant subject to treatment,” as identified in §268.45(b).

(c) Following treatment with an appropriate extraction or destruction technology, hazardous debris that fails to exhibit any characteristic of hazardous waste is excluded from the definition of hazardous waste and need not be managed in a Subtitle C facility. Debris contaminated with a listed hazardous waste will be eligible for land disposal once treated with an immobilization technology from this section, but it will continue to be a hazardous waste and must be managed in a Subtitle C facility.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Treatment Standards (continued)

(d) Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means, and remains subject to the waste-specific treatment standards under §268.40 for the waste contaminating the debris, except that residue from a spalling technology remains hazardous debris subject to further treatment as debris.

§268.48 Universal Treatment Standards

(a) Table UTS identifies the hazardous constituents, along with the non-wastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents, these treatment standards may not be exceeded. Compliance is measured by analysis of grab samples, unless otherwise noted in Table UTS.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Subpart D, Sections 268.40 through 268.45 and 268.48

An inspector should carefully review the notification records for a particular waste code or waste code matrix to determine if:

- the proper wastewater or nonwastewater (defined in §268.2) category was identified;
- the applicable treatment subcategory was identified (e.g., D001, oxidizers based on §261.21(a)(4)); and
- all treatment standards have been met, including underlying hazardous constituents, where applicable.

In most cases, if a specified technology is required under §268.40, the resulting treatment residue need not be tested to determine compliance with Subpart D. Exceptions do exist, however, including F024 nonwastewaters.

The numeric standards given to hazardous constituents in §268.48, Table UTS, are the basis for any numeric levels given in §268.40, Table Treatment Standards for Hazardous Wastes. However, only characteristic wastes whose treatment standard includes, "and meet §268.48 standards," must demonstrate compliance with the universal treatment standards for the underlying hazardous constituents reasonably expected to be present at the point of generation. In situations where a waste may be significantly different from the waste considered in establishing a treatment standard, a variance from the treatment standard may be issued under §268.44.

When a generator initiates shipment of prohibited debris to a TSDF for treatment by an alternative technology from §268.45, he must also provide the proper notification pursuant to §§268.7(a)(1)(iv) or 268.7(a)(3)(v).

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Storage Prohibition

§268.50 Prohibitions on Storage of Restricted Waste

(a) The storage of hazardous wastes restricted from land disposal under Part 268 Subpart C is prohibited, unless the following conditions are met:

(1) A generator stores such waste in compliance with §262.34 solely to accumulate enough of the waste to facilitate proper recovery, treatment, or disposal.

(2) A TSDF stores such waste in tanks or containers solely to facilitate proper recovery, treatment, or disposal and:

(i) Each container is clearly marked to identify its contents and the date each period of accumulation begins;

(ii) Each tank is clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at the facility.

(3) A transporter stores manifested shipments of such wastes at a transfer facility for ten days or less.

(b) A TSDF may store wastes up to one year unless the Agency can demonstrate that such storage was not solely to facilitate proper recovery, treatment, or disposal.

(c) A TSDF may store wastes beyond one year; however, the TSDF bears the burden of proving that such storage was solely to facilitate proper recovery, treatment, or disposal.

(d) If a generator's waste is exempt from a prohibition on land disposal due to a case-by-case extension granted under §268.5, an approved petition under §268.6, or a national capacity variance, §268.50 does not apply during the exemption.

(e) The prohibition in paragraph (a) does not apply to wastes that have met the required treatment standards.

(f) Liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm must be stored in compliance with 40 CFR 761.65(b), and must be removed from storage and treated or disposed as required by Part 268 within one year of the date such waste is first placed into storage.

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TABLE III-7 LAND DISPOSAL RESTRICTIONS REGULATORY REQUIREMENTS

Inspection Procedures - Subpart E, Section 268.50

Key Considerations:

- Is the generator accumulating waste solely to facilitate proper recovery, treatment, or disposal?
- Are restricted wastes stored only in tanks or containers?
- Is each container used to accumulate wastes at the TSDF marked with the contents and accumulation start date? Is this information provided in the operating record?
- Is each tank at the TSDF used to accumulate wastes marked with the amount and the accumulation start date? Tanks have the option of displaying the information or having the required information in the operating record.
- For TSDFs, has a year expired since the start of the accumulation period?
- Liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm cannot be stored for more than one year because of TSCA storage restrictions.
- The one-year period is only a benchmark which shifts the burden of proof from EPA to the facility. For a period of one year in length, EPA bears the burden of showing that the facility is storing restricted waste longer than necessary. After the one-year period, the facility must substantiate that storage is necessary. This does not preempt EPA from requiring a facility to remove its waste from storage anytime within one year if it determines that the facility has accumulated sufficient quantity to facilitate proper treatment, recovery or disposal.
- Waste placed in storage prior to the effective date of the prohibition for that waste are not subject to LDR requirements until removed from storage; however, once removed from storage, these wastes must meet treatment standards prior to land disposal.

  Mixed radioactive/hazardous wastes pose a major problem under the land disposal restrictions because very few (if any) commercial facilities will accept these wastes for treatment or disposal. However, generators of these wastes must still comply with the treatment standards for the hazardous portion of the wastes, and are also subject to the storage, prohibitions that limits the conditions under which restricted wastes must be stored.

Section 268.50 effectively eliminates the use of surface impoundments and waste piles as storage units for wastes which are prohibited from land disposal.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for the Management of Used Oil

§279.1 Definitions

Existing tank is a tank used for the storage or processing of used oil that is in operation or for which installation has commenced prior to the effective date of the State authorized used oil program.

New tank is a tank that will be used to store or process used oil that is not an existing tank.

Processing means chemical or physical operations designed to produce from used oil, or to make used oils more amenable for the production of fuel oils, lubricants or other derivatives. Processing includes blending used oils with virgin petroleum products, blending used oils to meet fuel specification, filtration, simple distillation, physical or chemical separation, and re-refining.

Used oil means any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of such use is physically or chemically contaminated.

§279.10 Applicability

(a) EPA presumes that used oil is to be recycled unless a used oil handler disposes of used oil, or sends it for disposal. Except as provided in §279.11, the regulations in Part 279 apply to used oil whether or not it exhibits any characteristics of hazardous waste identified in Subpart C of Part 261.

(b) (1) (i) Mixtures of used oil and listed hazardous waste are subject to the regulations in Subpart D of Part 261 rather than as used oil under Part 279.

(ii) Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste regulated under Subpart D, though persons may rebut this by demonstrating that the used oil does not contain hazardous waste. The rebuttable presumption does not apply to:

(A) Metal working oils/fluids containing chlorinated paraffins that are processed through a tolling agreement to reclaim the oils/fluids; or

(B) Used oil contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation.

(2) (i) Mixtures of used oil and hazardous waste that exhibit a characteristic of hazardous waste other than ignitability are regulated as hazardous waste under Parts 260 through 266, 268, 270, and 124.

(ii) Mixtures of used oil and hazardous waste that do not exhibit any characteristic of hazardous waste are regulated as used oils under this Part.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart B, Sections 279.1 through 279.11

Key Considerations:

- Is the used oil disposed of, or is it sent to be recycled?
- Has the used oil been mixed with a listed hazardous waste?
- Has the used oil been mixed with a characteristically hazardous waste? If so, was it an ignitable waste? Does it still exhibit the characteristic of ignitability?
- Does the used oil contain more than 1000 ppm total halogens?
- Does the used oil meet specification?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for the Management of Used Oil (continued)

§279.10 Applicability (continued)

(iii) Mixtures of used oils and characteristically ignitable hazardous waste that is not listed in Subpart D of Part 261 is regulated as a used oil under this Part if the resultant mixture does not exhibit the characteristic of ignitability.

(3) Mixtures of used oil and CESQG hazardous waste are regulated as used oil under this Part.

(d) Mixtures of used oil with products are regulated as used oil unless:

(2) The mixture is of used oil and diesel fuel mixed on-site by the used oil generator for use in the generator's own vehicles. However, prior to mixture the used oil is subject to Subpart C of Part 279.

(e) Materials that are derived from reclaimed used oil and that are beneficially used and not burned for energy recovery are not regulated as used oil and are not solid or hazardous wastes.

(2) Materials produced from used oil that are burned for energy recovery are regulated as used oils under this Part.

(4) Re-refining distillation bottoms that are used as feedstock to manufacture asphalt are not used oil and are also not subject to regulation as a hazardous waste at this time.

(f) Wastewater discharge which is subject to regulation under §§402 or 307(b) of the Clean Water Act that is contaminated with de minimis quantities of used oil is not subject to regulation as a used oil. This exception does not apply if the used oil discharge is the result of abnormal manufacturing operations such as substantial leaks or spills.

(g) Used oil that is placed directly in a crude oil or natural gas pipeline is subject to the used oil management standards only prior to the point of its introduction into the pipeline.

§279.11 Used Oil Specifications

Used oil that exceeds any specification level is subject to this Subpart as an "off-specification used oil." If the used oil is shown not to exceed any specification and the person making the showing complies with §§279.72, 279.73, and 279.74(b), the used oil is no longer subject to this Part.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for the Management of Used Oil (continued)

§279.12 Prohibitions

(a) Used oil cannot be managed in surface impoundments and waste piles unless they are subject to Part 264 or 265.

(c) Off-specification used oil may only be burned for energy recovery in the following devices:

(1) Industrial Furnaces;

(2) (i) Boilers that are located at manufacturing facilities where substances are made into new products;

(ii) In utility boilers used for energy production; or

(iii) Used-oil fired space heaters meeting the requirements of §279.23.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart B, Section 279.12

Key Considerations:

- Is the used oil stored in surface impoundments or waste piles? Is the storage unit subject to Part 264 or 265?
- Is the off-specification used oil burned for energy recovery? Is the burning unit a BIF or a space heater?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Generators

§279.20 Standards for Generators of Used Oil

(a) A used oil generator is any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation, except:

(1) Household "do-it-yourselfer" (DIY) used oil generators;

(2) Vessels at sea or at port;

(3) Generators of mixtures of diesel fuel and used oil when the generator uses the mixture in his own vehicles. The used oil is subject to Subpart C until mixed; and

(4) Farmers who generate an average of 25 gallons or less per month on an annual basis from farm vehicles or machinery.

(b) (1) Generators other than §279.24(a)&(b) self-transporters must also comply with the Subpart E Standards for used oil transporters.

(2) Used oil generators who process or re-refine must comply with Subpart F, Standards for Used Oil Processors and Re-Refiners.

(3) Generators who burn off-specification used oil, except in §279.23 space heaters must comply with Subpart G, Standards for Off-Specification Used Oil Burners.

(4) Generators who direct off-specification used oil to a burner or who first claim that the used oil is on-specification must comply with Subpart H, Standards for Used Oil Marketers.

(5) Generators who dispose of or use used oil as a dust suppressant must comply with Subpart I, Standards for Used Oil Disposal and Use as a Dust Suppressant.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart C, Section 279.20

Key Considerations:

- Who is the initial generator of the used oil? Is this person exempt from the definition of generator per §279.20(a)?
- Does the used oil generator take part in any other used oil activities? If so, are these activities also regulated by Part 279?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Generators (continued)

§279.22 Used Oil Storage

Used oil generators that store used oil in underground storage tanks (USTs) are subject to the regulations in Part 280.

(a) Used oil storage units must be subject to Part 264 or 265.

(b) Used oil aboveground tanks and containers must be in good condition and must not be leaking.

(c) Used oil must be stored in aboveground tanks or containers clearly labeled "used oil." Fill pipes used to transfer used oil to USTs must also be clearly labeled "used oil."

(d) Used oil not stored in USTs that is released into the environment must be stopped, contained, and cleaned up and managed properly. If necessary, repairs or replacements of leaking equipment should be made to prevent future releases.

§279.23 On-Site Burning in Space Heaters

(a) Generators may burn used oil in space heaters provided that:

(1) The used oil burned is generated only by the owner/operator or DIY oil generators;

(2) The heater has a maximum capacity of not more than 0.5 million Btu per hour; and

(3) The heater combustion gases are vented to the ambient air.

§279.24 Off-Site Shipments

Generators must ensure that their used oil is transported only by transporters who have obtained an EPA identification number, except for:

(a) Generators who self-transport less than 55 gallons of generator or DIY generated used oil at any time;

(b) Generators who self-transport less than 55 gallons of their own used oil from their site to an aggregation point; or

(c) Generators who arrange for used oil to be transported pursuant to a tolling agreement under which the reclaimed oil is returned to the generator.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart C, Sections 279.22 through 279.24

Key Considerations:

- In what type of unit is the used oil stored?
- Is the storage unit in good condition? Is it leaking?
- Are the used oil storage units (other than USTs) and/or fill pipes clearly labeled “Used Oil”?
- Have any used oil releases occurred from a used oil storage unit? Was the release cleaned up and properly managed?
- Does the used oil generator burn used oil in a space heater?
- Does the used oil generator ship used oil off-site?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Collection and Aggregation Centers

§279.31 Used Oil Collection Centers

(a) A used oil collection center is any site/facility that accepts and stores used oil from self-transporting used oil generators or from DIY generators.

(b) Owners and operators of all used oil collection centers must comply with the used oil generator standards and must be registered/licensed/permitted by the appropriate State or local government to manage used oil.

§279.32 Used Oil Aggregation Points Owned by the Generator

Owners and operators of all used oil collection center aggregation points may only aggregate used oil from their own collection sites and must comply with the used oil generator standards.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart D, Sections 279.31 through 279.32

Key Considerations:

- Is the used oil collection center registered, licensed, or permitted by a local or State authority?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Transporters and Transfer Facilities

§279.40 Applicability

(a) The following types of used oil transportation are not subject to the Subpart E requirements:

(1) On-site transportation;

(2) & (3) Generator self-transportation in accordance with §279.24(a) or (b);

(4) Transportation of DIY generated used oil to a regulated generator, collection center, aggregation point, processor/re-refiner, or burner who is subject to Subpart E.

(b) Transporters who import used oil from abroad or who export used oil outside the U.S. are subject to the Subpart E requirements from the time the used oil enters and until it exits the U.S.

(c) Unless trucks that were previously used to transport hazardous waste are empty according to §261.7 before transporting the used oil, the used oil will be considered to have been mixed with a hazardous waste and must be managed as a hazardous waste unless it meets the requirements of §279.10(b).

(d) Transporters who take part in other used oil activities such as processing and burning must comply with all applicable requirements.

§279.41 Restrictions on Transporters Who Are Not Also Processors or Re-Refiners

(a)& (b) Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation. However, any processing that takes place must be incidental unless the transporter is complying with Subpart F.

§279.42 Notification

(a) Used oil transporters must have EPA identification numbers. If the used oil transporter has not previously complied with the notification requirements of RCRA section 3010, he/she must obtain an EPA identification number.

(b) Used oil transporters who have not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting a completed EPA Form 8700-12 or sending a letter requesting an EPA identification number to the State or EPA Region.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart E, Sections 279.40 through 279.42

Key Considerations:

- Has the used oil transporter obtained an EPA identification number?
- Is the used oil transported in trucks that were previously used to transport hazardous waste?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Transporters and Transfer Facilities (continued)

§279.43 Used Oil Transportation

(a) A used oil transporter can only deliver used oil to:

(1) Another used oil transporter who has an EPA ID number;

(2) A used oil processing/re-refining facility that has an EPA ID number;

(3) An off-specification used oil burner who has an EPA ID number; or

(4) An on-specification used oil burner.

(c) In the event of a discharge of used oil, the transporter must notify the applicable authorities and must take appropriate action to protect human health and the environment.

§279.44 Rebuttable Presumption for Used Oil

(a) The transporter must determine whether the total halogen content of used oil being transported or stored at a transfer facility is above or below 1000 ppm.

(b) The transporter must make this determination by:

(1) Testing the used oil; or

(2) Applying knowledge of the halogen content in light of the materials or processes used.

(c) Used oil containing greater than or equal to 1,000 ppm total halogens is presumed to have been mixed with a hazardous waste because it has been mixed with a halogenated hazardous waste listed in Part 261 subpart D. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste. Analytical methods from SW-846, Third Edition can show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Part 261, Appendix VIII.

(1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids.

(2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation.

(d) Records of analyses conducted or information used to comply with §279.63(a)-(c) must be maintained by the transporter for at least three years.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart E, Sections 279.43 through 279.44

Key Considerations:

- Does the used oil contain above 1000 ppm total halogen content?
- How did the transporter determine the halogen content?
- Was the used oil mixed with a hazardous waste?
- Does the transporter keep records of used oil analyses for three years?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Transporters and Transfer Facilities (continued)

§279.45 Used Oil Storage at Transfer Facilities

Used oil transporters are subject to all applicable Spill Prevention Control and Countermeasures Regulations, as well as all applicable UST regulations.

(a) Used oil transfer facilities are transportation related facilities and include loading docks, parking and storage areas, and other areas where shipments of used oil are held for more than 24 hours during the normal course of transportation, but not longer than 35 days. Transfer facilities that store used oil for more than 35 days are subject to regulation as used oil processors and re-refiners.

(b) Used oil transfer facility owners and operators must store used oil only in tanks, containers or other Part 264/265 regulated units.

(c) Containers and aboveground tanks used to store used oil must be in good condition (no severe rusting, apparent structural defects or deterioration) and not leaking (no visible leaks).

(d) Containers used to store used oil at transfer facilities must be equipped with a secondary containment system. The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm or retaining wall. The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(e) New and existing aboveground tanks storing used oil at transfer facilities must be equipped with a secondary containment system.

(1) The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm or retaining wall. For existing tank systems, the floor needs only extend to where existing portions of the tank meet the ground, or an equivalent secondary containment system.

(2) The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(f) New aboveground tanks storing used oil at transfer facilities must be equipped with a secondary containment system.

(1) The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm, or retaining wall, or an equivalent secondary containment system.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart E, Section 279.45(a) through (f)

Key Considerations:

- How long is the used oil stored at the transfer facility? Is it longer than 35 days? If so is the transfer facility complying with the standards of Part 279 Subpart F?
- Does the used oil storage unit have secondary containment?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Transporters and Transfer Facilities (continued)

(2) The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

§279.45 Used Oil Storage at Transfer Facilities (continued)

(g) Containers, aboveground tanks, and UST fill pipes used to store or transfer used oil at transfer facilities must be clearly marked "Used Oil."

(h) Upon detection of a release of used oil to the environment not subject to the requirements of 40 CFR Part 280 Subpart F, an owner/operator of the used oil transfer facility must perform the following cleanup steps:

(1) & (2) Stop and contain the released used oil;

(3) Clean up and manage properly the released used oil and other materials; and

(4) & (5) Repair or replace any leaking used oil storage containers or tanks before returning them to service.

§279.46 Tracking

(a) Used oil transporters must keep a record of each used oil shipment. The record must include:

(1) & (2) Name, address and EPA ID number (if applicable) of party who provided oil for transport;

(3) Quantity of used oil accepted;

(4) & (5) Date of acceptance and signature dated upon receipt of used oil of party providing used oil for transport.

(b) Used oil transporters must keep a record of each shipment of used oil that is delivered to another transporter, burner, processor/re-refiner or disposal facility. The records must include:

(1) & (2) Name, address, and EPA ID number of the receiving party;

(3) Quantity of used oil delivered;

(4) & (5) Date of delivery and signature, dated upon receipt of used oil of a representative of the receiving party.

(d) The above records must be kept for at least three years.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart E, Sections 279.45(g) through 279.46

Key Considerations:

- Are the used oil storage and transfer units (other than USTs) clearly labeled?
- Has release of used occurred at the transfer facility? If so, was the release properly cleaned up and managed?
- Does the transporter keep a record of each shipment of used oil that is delivered to another transporter, burner, processor/re-refiner or disposal facility? If so, how long does the transporter keep the records?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners

§279.50 Applicability

(a) The requirements of Subpart F do not apply to:

(1) Transporters that conduct incidental processing during the normal course of transportation; or

(2) Burners that conduct incidental processing during the normal course of used oil management prior to burning.

(b) Processors who take part in other used oil activities must comply with all applicable requirements.

(3) Processors who burn off-specification used oil for energy recovery must comply with Subpart G of Part 279, except for:

(i) Used oil that is burned in space heaters in compliance with §279.23; or

(ii) Used oil that is burned for purposes of processing used oil that is incidental to used oil processing.

(4) Processors/re-refiners who direct shipments of off-specification used oil from their facility to a burner or first claim that the oil meets specification must comply with Subpart H of Part 279.

§279.51 Notification

(a) Used oil processors and re-refiners must have EPA ID numbers. If the processor or re-refiner has not previously complied with the notification requirements of RCRA section 3010, he/she must obtain an EPA identification number.

(b) Used oil processors and re-refiners who have not received an EPA ID number may obtain one by notifying the Regional Administrator of their used oil activity by submitting a completed EPA Form 8700-12 or sending a letter requesting an EPA identification number to the State or EPA Region.

§279.52 General Facility Standards

(a) Owners/operators of used oil processing and re-refining facilities must:

(1) Maintain and operate the facility in a manner to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of used oil which could threaten human health or the environment.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart F, Sections 279.50 through 279.52

Key Considerations:

- Has the used oil processor or re-refiner obtained an EPA ID number?

- Are the emergency coordinator and backup trained to carry out the provisions of the contingency plan?

During the file review, the inspector should look for reports of incidents requiring the implementation of the contingency plan. Special note should be made of situations in which the contingency plan should have been implemented but was not.

A facility must file a report with the Regional Administrator within fifteen days of any incident. During the inspection of a facility reporting such an incident, the inspector should view the involved area in order to check that any spilled or released material had been contained and disposed of properly, and that any equipment which was used has been decontaminated and is fit for reuse.

- Have all local authorities been made aware of potential dangers at the site? Ask to see the agreements made with all appropriate local emergency response teams.

The owner/operator should provide proof that all local authorities were contacted, such as by producing a certified or registered letter, and that such authorities either agreed to a plan or have declined to participate.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.52 General Facility Standards (continued)

(2) All facilities must be equipped with the following equipment unless none of the hazards posed by used oil handled at the facility could require a particular piece of specified equipment.

(i) Internal communications or alarm system;

(ii) Device such as a telephone capable of summoning emergency assistance from local emergency units;

(iii) Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment; and

(iv) Water at adequate volume and pressure to supply appropriate equipment.

(3) All emergency equipment must be tested and maintained as necessary to assure its proper operation in an emergency.

(4) Whenever used oil is being handled, or if there is only one employee on the premises involved, immediate access to an internal alarm or emergency communication device must be available to all personnel unless such device is not required under (a)(2) of the section.

(5) The owner/operator must maintain aisle space as needed to allow unobstructed movement of personnel and emergency equipment to any area of the facility during an emergency.

(6) (i) The owner/operator must attempt to make:

(A) Arrangements to familiarize emergency response teams with the layout of the facility, properties of used oil handled at the facility, and associated hazards;

(B) Agreements designating primary emergency authority and agreements with any other authorities to provide support;

(C) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

(D) Arrangements to familiarize local hospitals with the properties of used oil handled at the facility and associated hazards.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.52 General Facility Standards (continued)

(ii) Where State or local authorities decline to enter into such arrangements, the owner/operator must document the refusal in the operating record.

(b) (1) (i) Each owner/operator must have a contingency plan for his facility which is designed to minimize hazards to human health or the environment from fires, explosions or any fires, explosions, or unplanned releases of used oil or waste constituents.

(ii) The provisions of the contingency plan must be carried out whenever there is a situation which could threaten human health or the environment.

(2) (i) The contingency plan must describe the actions facility personnel must take with respect to any fires, explosions, or unplanned sudden or non-sudden release of used oil.

(ii) If the owner/operator has already prepared a Spill Prevention, Control, and Countermeasures Plan, he need only amend that plan to incorporate used oil management provisions.

(iii) The contingency plan must describe arrangements agreed to by local emergency response teams.

(iv) The contingency plan must list names, addresses, and phone numbers of all persons qualified to act as emergency coordinator, and this list must be kept up to date.

(v) The contingency plan must include a list of all emergency equipment. In addition, the contingency plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(vi) The contingency plan must include an evacuation plan for facility personnel.

(3) A copy of the contingency plan must be:

(i) Maintained at the facility; and

(ii) Submitted to all local emergency response teams.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.52 General Facility Standards (continued)

(4) The contingency plan must be reviewed, and immediately amended, whenever:

(i) Regulations are revised;

(ii) The plan fails in an emergency;

(iii) The facility changes in such a manner that the new design or other circumstances increase the potential of hazardous waste releases, or require a change in emergency response procedure;

(iv) The list of emergency coordinators changes; or

(v) The list of emergency equipment changes.

(5) At all times, there must be at least one employee at the facility or on call with the responsibility for coordinating all emergency response measures.

(6) (i) When there is an emergency situation, the emergency coordinator must:

(A) Activate internal facility alarms; and

(B) Notify appropriate State or local agencies.

(ii) The emergency coordinator must immediately identify the character, exact source, and amount of any released materials.

(iii) The emergency coordinator must assess possible hazards to human health or the environment that may result from the release.

(iv) If the facility has had a fire, explosion, or release, the emergency coordinator must report his findings to appropriate local authorities and the National Response Center or the 40 CFR Part 1510 on-scene coordinator.

(v) During an emergency the emergency coordinator must take all reasonable steps to ensure that fires, explosions, and releases do not occur or spread to other used oil or hazardous waste at the facility.

(vi) If the facility stops operation during an emergency the emergency coordinator must monitor for leaks, ruptures, pressure buildup, or gas generation in equipment.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.52 General Facility Standards (continued)

(vii) Immediately after an emergency, the emergency coordinator must provide for recycling, storing, or disposing of recovered used oil, contaminated soil, surface water, or any other material that results from a fire, explosion, or release.

(viii) The emergency coordinator must ensure that no waste or used oil that may be incompatible with the released material is recycled, treated, stored, or disposed of until cleanup procedures are completed and all emergency equipment is cleaned and fit for reuse. The Regional Administrator and appropriate authorities must be notified that the facility is in compliance before operations are resumed.

(ix) The time, date, and details of any incident that requires implementing the contingency plan must be recorded in the operating record. Within 15 days after the incident, the emergency coordinator must submit a written report on the incident to the Regional Administrator.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.53 Rebuttable Presumption for Used Oil

(b) The owner/operator of used oil processing/re-refining facility must determine if the used oil contains above or below 1,000 ppm total halogens by:

(1) Testing the used oil;

(2) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

(c) Used oil containing greater than or equal to 1,000 ppm total halogens is presumed to be mixed with a hazardous waste because it has been mixed with a halogenated hazardous waste listed in Part 261 subpart D. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste. Analytical methods from SW-846, Third Edition can show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Part 261, Appendix VIII.

(1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids.

(2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation.

(d) Records of analyses conducted or information used to comply with §279.63(a)-(c) must be maintained by the burner for at least three years.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart F, Sections 279.53

Key Considerations:

- Does the used oil contain above 1000 ppm total halogen content?
- How did the used oil processor or re-refiner determine the halogen content?
- Was the used oil mixed with a listed hazardous waste? If so, does the used oil processor or re-refiner treat the mixture as a hazardous waste?
- Does the used oil processor or re-refiner keep records of used oil analyses for three years?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.54 Used Oil Management

Wastewaters containing "de minimis" quantities of used oil are not subject to the requirements of this Part, including the prohibition on storage in units other than tanks or containers. Used oil processor/re-refiners are subject to all applicable Spill Prevention, Control and Countermeasures (SPCC) (40 CFR part 112) in addition to this subpart. Used oil processor/re-refiners are also subject to the Underground Storage Tank (40 CFR Part 280) standards for used oil stored in underground tanks.

(a) Used oil processor/re-refiners may not store used oil in units other than tanks, containers or units subject to regulation under 40 CFR Part 264/265.

(b) Containers and aboveground tanks used to store used oil must be in good condition (no severe rusting, apparent structural defects or deterioration) and not leaking (no visible leaks).

(c) Containers used to store used oil at processing/re-refining facilities must be equipped with a secondary containment system. The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm or retaining wall. The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(d) New and existing aboveground tanks storing used oil at processing/re-refining facilities must be equipped with a secondary containment system.

(1) The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm or retaining wall. For existing tank systems, the floor needs only extend to where existing portions of the tank meet the ground, or an equivalent secondary containment system.

(2) The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(e) New aboveground tanks storing used oil at processing/re-refining facilities must be equipped with a secondary containment system.

(1) The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm, or retaining wall, or an equivalent secondary containment system.

(2) The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart F, Sections 279.54

Key Considerations:

- Are the used oil storage and transfer units (other than USTs) clearly labeled?
- Has a release of used oil occurred at the processing/re-refining facility? If so, was the release properly cleaned up and managed?
- Has the owner/operator of the processing/re-refining facility closed any storage areas? If so, were these areas properly closed and decontaminated?
- Were any used oil contaminated tank system components left in place? If so, this area will need to be closed in accordance with the landfill closure requirements in §265.310.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.54 Used Oil Management (continued)

(f) Containers and aboveground tanks used to store used oil, and fill pipes used to transfer used oil into underground storage tanks at burner facilities, must be labeled or clearly marked with the words "Used Oil."

(g) Upon detection of a release of used oil to the environment not subject to the requirements of 40 CFR Part 280 Subpart F, a used oil processor/re-refiner must perform the following cleanup steps:

(1) &
(2) Stop and contain the released used oil;

(3) Clean up and manage properly the released used oil and other materials; and

(4) Repair or replace any leaking used oil storage containers or tanks before returning them to service.

(h) (1) Owners/operators who store or process used oil in above ground tanks must comply with the following:

(i) At closure of the tank system the owner/operator must remove or decontaminate used oil residues in the tank system, containment system, contaminated soils, and other materials contaminated with used oil. These wastes must be handled as hazardous waste unless they are not hazardous according to Part 261.

(ii) If all contaminated materials cannot be removed or decontaminated, the owner/operator must close the tank system and perform post closure care in accordance with the requirements in §265.310.

(2) Owners/operators who store used oil in containers at closure must remove all containers holding used oil or residues from the site. The owner/operator must also remove or decontaminate all used oil residues, containment system, contaminated soils, and other materials contaminated with used oil. These wastes must be managed as hazardous waste unless they are not hazardous according to Part 261.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.55 Analysis Plan

(a) The owners/operators of used oil processing facilities must develop and follow a written analysis plan which describes the procedures that will be used to determine if the used oil is off-specification, and to rebut the presumption of hazardous waste mixing. The plan must specify:

(1) Whether sample analyses or knowledge of halogen content will be used.

(2) If sample analyses are to be used:

(i) The sampling method;

(ii) The frequency of sampling;

(iii) The test methods used to analyze the used oil.

(3) The type of information that will be used to determine the halogen content of the used oil.

(b) The owners/operators of used oil processing facilities must develop and follow a written analysis plan which describes the procedure that will be used to determine that the used oil is on-specification. The plan must specify:

(1) Whether sample analyses or knowledge of halogen content will be used.

(2) If sample analyses are to be used:

(i) The sampling method;

(ii) The frequency of sampling;

(iii) The test methods used to analyze the used oil.

(3) The type of information that will be used to make the on-specification used oil fuel determination.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart F, Sections 279.55

Remember:

- Review the facility's written used oil analysis plan before checking the file of used oil analyses.
- Make sure that the methods described in Part 261 and SW 846 are acceptable for sampling and analysis.
- The analysis plan must be adequate for determining whether the used oil is on- or off-specification and halogen content.
- Be on the lookout for used oil or waste streams that have not been tested.
- If an analysis plan is adequate, the inspector should verify that the used oil analysis is performed for each shipment of used oil.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Standards for Used Oil Processors and Re-Refiners (continued)

§279.56 Tracking

(a) Used oil processors/re-refiners must keep a record of each used oil shipment accepted for processing/re-refining. These records may take the form of a log, invoice, manifest, bill of lading or other shipping document. The records should identify the name, address and EPA ID number of the transporter and generator or processor/re-refiner from whom the oil was sent as well as the quantity of used oil and date shipped.

(b) Used oil processors/re-refiners must keep a record of each shipment of used oil that is shipped to a used oil burner, processor/re-refiner or disposal facility. These records may take the form of a log, invoice, manifest, bill of lading or other shipping document. The records should identify the name and address and EPA ID number of the transporter and of the facility receiving the shipment, the quantity and date of used oil fuel delivered.

(c) Records for both (a) and (b) must be retained for at least three years.

§279.57 Operating Record and Storage

(a) (1) The owner/operator must keep a written operating record at the facility.

(2) The record must contain:

(i) Records and results of used oil analyses; and

(ii) Summary reports and details of all emergency incidents.

(b) A used oil processor/re-refiner must make a biennial report (by March 1 of each even numbered year) to the Regional Administrator that contains the following information:

(1) EPA ID number, name, and address of the processor/re-refiner;

(2) Calendar year covered by the report; and

(3) Quantities of used oil accepted for re-refining or processing and the manner in which this is done.

§279.58 Off-Site Shipment of Used Oil

Used oil processors/re-refiners who initiate shipments of used oil off-site must ship the used oil using a used oil transporter who has obtained an EPA ID number.

§279.59 Management of Residues

Owners/operators who generate residues from the storage, processing, or re-refining of used oil must manage the residues according to §279.10(e)

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart F, Sections 279.56 through 279.59

Key Considerations:

- Does the facility owner/operator keep a written operating log of the facility at the facility? If not, where is the log and is it easily accessible?
- Does the operating record contain the required records, used oil analyses, and summary reports?
- Did the owner/operator make a biennial report to the Regional Administrator?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery

§279.60 Applicability

(a) These regulations apply to used oil burners that burn used oil in a facility where used oil not meeting the specification in §279.11 is burned for energy recovery in §279.61(a). However, used oil generators burning oil in an on-site space heater under the provisions of §279.23 or processors and/or re-refiners burning oil for the purposes of processing the used oil are not subject to these specifications.

(b) Used oil burners are subject to other applicable provisions of §279. Specifically, a used oil burner who:

(1) Generates or transports used oil is subject to Part 279 Subpart C;

(2) Transports used oil is subject to Part 279 Subpart E;

(3) Processes or re-refines used oil (except as provided in §279.61(b)) must comply with Part 279 Subpart F;

(4) Directs shipments of used oil from his/her facility to a used oil burner or is the first to claim that the used oil to be burned for energy recovery meets the used oil specifications must comply with Subpart H; and

(5) Disposes of used oil, including the use of used oil as a dust suppressant, must comply with Subpart I.

(c) Persons who burn used oil that meets the used oil fuel specification of §279.11 are not subject to this subpart as long as the burner complies with Part 279 Subpart H.

§279.61 Restrictions on Burning

(a) Used oil fuel may only be burned for energy recovery in industrial furnaces, boilers (including industrial boilers located on a site of a facility engaged in a manufacturing press where substances are transformed into new products, utility boilers, or used oil-fired space heaters), and hazardous waste incinerators subject to subpart O of parts 264 and 265.

(b) Used oil burners may not process used oil unless they comply with the requirements of Part 279 subpart F. However, used oil burners may aggregate off-specification used oil with virgin oil or on-specification used oil for purposes of burning. They may not aggregate for purposes of producing on-specification used oil.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - G, Sections 279.60 through 279.61

Key Considerations:

- Does the unit in which the off-specification oil is burned meet the definition of a boiler or industrial furnace or a hazardous waste incinerator as defined in §260.10?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery (continued)

§279.62 Notification

(a) Used oil burners must have EPA ID numbers. If the burner has not previously complied with the notification requirements of RCRA section 3010, he/she must obtain an EPA ID number.

(b) Used oil burners who have not received an EPA ID number may obtain one by notifying the Regional Administrator of their used oil activity by submitting a completed EPA Form 8700-12 or sending a letter requesting an EPA ID number to the State or EPA Region.

§279.63 Rebuttable Presumption for Used Oil

(a) Used oil burners must determine whether the total halogen content is above or below 1,000 ppm.

(b) Used oil burners must determine if the used oil is contains above or below 1,000 ppm by either testing the used oil, applying knowledge of the halogen content of the used oil in light of the materials or processes used, or using information provided by the processor/re-refiner.

(c) Used oil containing greater than or equal to 1,000 ppm total halogens is presumed to be mixed with a hazardous waste because it is has been mixed with a halogenated hazardous waste listed in Part 261 subpart D. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste. Analytical methods from SW-846, Third Edition can show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Part 261, Appendix VIII.

(1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids.

(2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation.

(d) Records of analyses conducted or information used to comply with §279.63(a)-(c) must be maintained by the burner for at least three years.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart G, Sections 279.62 through 279.63

Key Considerations:

- Has the burner obtained an EPA ID number?
- Has the burner determined if the used oil contains above or below 1,000 ppm total halogen content?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery (continued)

§279.64 Used Oil Storage

Wastewaters containing "de minimis" quantities of used oil are not subject to the requirements of this Part, including the prohibition on storage in units other than tanks or containers. Used oil burners are subject to all applicable Spill Prevention, Control and Countermeasures (SPCC) (40 CFR part 112) in addition to this subpart. Used oil burners are also subject to the Underground Storage Tank (40 CFR Part 280) standards for used oil stored in underground tanks.

(a) Used oil burners may not store used oil in units other than tanks, containers or units subject to regulation under 40 CFR Part 264/265.

(b) Containers and aboveground tanks used to store used oil must be in good condition (no severe, rusting, apparent structural defects or deterioration) and not leaking (no visible leaks)

(c) Containers used to store used oil at burner facilities must be equipped with a secondary containment system. The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm or retaining wall. The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(d) & (e) New and existing aboveground tanks storing used oil at burner facilities must be equipped with a secondary containment system.

(1) The minimum requirements for the secondary containment system include dikes, berms, or retaining walls, and a floor that covers the entire area within the dike, berm or retaining wall. For existing tank systems, the floor needs only extend to where existing portions of the tank meet the ground, or an equivalent secondary containment system.

(2) The entire containment system must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

(f) Containers and aboveground tanks used to store used oil, and fill pipes used to transfer used oil into underground storage tanks at burner facilities, must be labeled or clearly marked with the words "Used Oil."

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart G, Sections 279.64

Key Considerations:

- Are the used oil storage and transfer units (other than USTs) clearly labeled?
- Has a release of used oil occurred at the facility? If so, was the release properly cleaned up and managed?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery (continued)

§279.64 Used Oil Storage (continued)

(g) Upon detection of a release of used oil to the environment not subject to the requirements of 40 CFR Part 280 Subpart F, a burner must perform the following cleanup steps:

(1) & (2) Stop and contain the released used oil;

(3) Clean up and manage properly the released used oil and other materials; and

(4) Repair or replace any leaking used oil storage containers or tanks before returning them to service.

§279.65 Tracking

(a) Used oil burners must keep a record of each used oil shipment accepted for burning. These records may take the form of a log, invoice, manifest, bill of lading or other shipping document. Records for each shipment include the following information:

(1) (4) Name, address, and EPA ID number (if applicable) of the transporter, generator, and processor/re-refiner who delivered or generated and sent the used oil to the used oil burner;

(5) & (6) Quantity of used oil accepted and the date of acceptance.

(b) The records documenting each shipment of used oil received must be retained for at least three years.

§279.66 Notices

(a) Before accepting the first shipment of used oil fuel from a generator, transporter, or processor/re-refiner, the burner must provide to the generator, transporter, or processor/re-refiner a one-time written and signed notice certifying that the burner has notified EPA of his/her used oil management activities and that the used oil will only be burned in an industrial furnace or boiler identified in §279.61(a). This certificate must be maintained for at least three years from the date of the last shipment of off-specification used oil received.

§279.67 Management of Residues

Burners will manage all residues generated from the storage or burning of used oil in the manner specified in §279.10(e).

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart G, Sections 279.65 through 279.66

Key Considerations:

- Does the operating record contain the required records and used oil analyses?
- Did the owner/operator provide the generator, transporter, or processor/re-refiner a one-time notification certifying that the EPA has been notified of the burner's activities? Has the burner made the notification to the EPA?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Used Oil Fuel Marketers

§279.70 Applicability

(a) A marketer is any person who directs a shipment of off-specification used oil from their facility to a used oil burner, or first claims that a used oil that is to be burned for energy recovery meets the used oil fuel specifications. Any person who is subject to the requirements of a marketer must also comply with one of subparts regulating used oil generators, used oil transporters and transfer facilities, used oil processors /re-refiners, or used oil burners burning off-specification used oil for energy recovery.

(b) Used oil generators, transporters who transport used oil received only from generators (unless the generator or transporter directs a shipment of off-specification used oil from their facility to a used oil burner), and persons who direct shipments of on-specification used oil and who are not the first person to claim that the oil meets the specifications.

§279.71 Prohibitions

(a) Used oil fuel marketers may initiate a shipment of off-specification used oil only to used oil burners who have an EPA ID number and who are burning the used oil in an industrial furnace or boiler.

§279.72 On-specification Used Oil Fuel

(a) Generators, transporters, processors/re-refiners, or burners must perform analyses or obtain copies of analyses or other information documenting that the used oil fuel meets the specifications. Used oil burned for energy recovery meeting these specifications is not subject to further regulation under this part. The records documenting the specifications for used oil fuel must keep copies of the analyses (or other information used to make the determination) for three years.

§279.73 Notification

(a) Used oil marketers must have EPA ID numbers. If the marketer has not previously complied with the notification requirements of RCRA section 3010, he/she must obtain an EPA ID number. Used oil marketers who have not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting a completed EPA Form 8700-12 or sending a letter requesting an EPA ID number to the State or EPA Region.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart H Sections 279.70 through 279.73

Key Considerations:

- Has the marketer obtained an EPA ID number?
- If the used oil is meets specification, are the required analyses kept for three years?

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Used Oil Fuel Marketers (continued)

§279.74 Tracking

(a) A used oil generator who directs a shipment of off-specification used oil to a burner must keep a record of each shipment sent to a used oil burner. These records may take the form of a log, invoice, manifest, bill of lading or other shipping document. The records should identify the name, address and EPA ID number of the transporter and burner as well as the quantity of used oil and date shipped.

(b) For on-specification used oil, a generator, transporter, processor/re-refiner, or burner who first claims the used meets the fuel specifications must keep a record of the shipment. These records may take the form of a log, invoice, manifest, bill of lading or other shipping document. The records should identify the name and address of the facility receiving the shipment, the quantity and date of used oil fuel delivered, and a cross-reference to the record of used oil fuel analysis or other information used to make the determination that it meets specification.

(c) Records for both on- and off-specification used oil fuel shipments must be retained for at least three years.

§279.75 Notices

(a) Before a used oil fuel generator, transporter, or processor/re-refiner directs the first shipment of off-specification used oil fuel to a burner, he/she must obtain a one-time written and signed notice certifying that the burner has notified EPA of his/her used oil management activities and that the used oil will only be burned in an industrial furnace or boiler identified in §279.61(a). This certificate must be maintained for at least three years from the date of the last shipment of off-specification used oil received.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - Subpart H Sections 279.74 through 279.75

Key Considerations:

- Does the marketer keep records of shipments of off-specification oil that are being sent to burners? How long are these records kept?
- If the marketer first claims that the used oil is on specification, does he/she keep records of the used oil shipment when it is sent off-site?
- Records for both on- and off-specification oil shipments must be retained for three years.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Use as a Dust Suppressant/Used Oil Disposal

§279.80 Applicability

(a) All used oils that cannot be recycled are therefore being disposed.

§279.81 Disposal

(a) Used oils that are identified as hazardous waste and cannot be recycled must be managed as hazardous waste in accordance with the requirements of 40 CFR Parts 260 through 266, 268, 270 and 124. Used oils that are not hazardous wastes, and cannot be recycled, must be disposed of in accordance with the requirements of 40 CFR Parts 257 and 258.

§279.82 Use as a Dust Suppressant

(a) Used oil cannot be used as a dust suppressant unless a State has petitioned EPA to allow the use of used oil -- that is not mixed with hazardous waste and does not exhibit a characteristic other than ignitability -- as a dust suppressant.

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TABLE III-8 USED OIL MANAGEMENT STANDARDS

Inspection Procedures - I, Sections 279.80 through 279.82

Key Considerations:

- If used oil is being used as a dust suppressant, has the state where the used oil is being employed petitioned EPA to allow the use of used oil?

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Appendix IV

Inspection Checklists

CHECKLISTS PAGE

1. General Site Inspection Information Form IV-2

2. General Facility Checklist IV-3

3. Air Emissions Checklist IV-10

4. Containers Checklist IV-31

5. Generators Checklist IV-32

6. Ground-Water Monitoring Checklist IV-38

7. Health & Safety Checklist IV-45

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9. Land Disposal Restrictions Checklist IV-80

10. Landfills Checklist IV-115

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13. Thermal Treatment Checklist IV-130

14. Transporters Checklist IV-133

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15. Waste Information Checklist IV-136

16. Waste Piles Checklist IV-140

17. RCRA Waste Minimization Checklist IV-143

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1. General Site Inspection Information Form

A. SITE NAME B. STREET (or other identifier)

C. CITY D. STATE E. ZIP CODE F. COUNTY NAME

G. SITE OPERATOR INFORMATION

1. Name 2. Telephone Number

3. Street 4. City 5. State 6. Zip Code

7. Facility Contact/Telephone No. 8. Responsible Official/Telephone No.

H. SITE DESCRIPTION

I. TYPE OF OWNERSHIP

___ 1. Federal ___ 2. State ___ 3. County ___4. Municipal ___5. Private

J. FUNCTION

___ 1. Generator ___ 2. Transporter ___ 3. Treatment ___4. Storage ___5. Disposal

K. REGULATORY STATUS

___ 1. Interim Status ___ 3. Part B Permit Application Submitted

___ 2. Permitted Facility ___ 4. Part B Permit Application in Preparation

L. INSPECTOR INFORMATION

1. Principal Inspector Name 3. Organization

2. Title 4. Telephone No. (area code and No.)

M. INSPECTION PARTICIPANTS

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

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2. General Facility Checklist

Section A - General Facility Standards (40 CFR 264/5 Subpart B)	Yes	No
1. Does facility have EPA Identification No.? (§§264/5.11)	___	___
a. If yes, EPA I.D. No. _____		
If no, explain. _____		
2. Has facility received hazardous waste from a foreign source? (§§264/5.12)	___	___
If yes, has it filed a notice with the Regional Administrator?		
Waste Analysis		
3. Does facility maintain a copy of the waste analysis plan on-site? (§§264/5.13)	___	___
a. If yes, does it include:		
1. Parameters for which each waste will be analyzed? (§§264/5.13(b)(1))	___	___
2. Test methods used to test for these parameters? (§§264/5.13(b)(2))	___	___
3. Sampling method used to obtain sample? (§§264/5.13(b)(3))	___	___
4. Frequency with which the initial analyses will be reviewed or repeated? (§§264/5.13(b)(4))	___	___
5. (For off-site facilities) waste analyses that generators have agreed to supply? (§§264/5.13(b)(5))	___	___
6. (For off-site facilities) procedures which are used to inspect and analyze each movement of hazardous waste, including: (§§264/5.13(c))	___	___
a. Procedures to be used to determine the identity of each movement of waste		
b. Sampling method to be used to obtain representative sample of the waste to be identified.		

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		Yes	No
4.	Does the facility provide adequate security through: (§§264/5.14)		
a.	24-hour surveillance system (e.g., television monitoring or guards)?	___	___
	OR		
b. 1.	Artificial or natural confining barrier around facility (e.g., fence or fence and cliff)? (§§264/5.14(b)) Describe:	___	___
	AND		
2.	Means to control entry through entrances (e.g., attendant, television monitors, locked entrance, controlled roadway access)? (§§264/5.14(b)(2)(ii)) Describe:	___	___

General Inspection Requirements

5.	Does the owner/operator maintain a written schedule at the facility for inspecting: (§§264/5.15)		
a.	Monitoring equipment?	___	___
b.	Safety and emergency equipment? (§§264/5.15(b))	___	___
c.	Security devices:	___	___
d.	Operating and structural equipment?	___	___
e.	Types of problems with equipment:		
1.	Malfunction (§§264/5.15(a))	___	___
2.	Operator error	___	___
3.	Discharges	___	___
6.	Does the owner/operator maintain an inspection log? (§§264/5.15(d))	___	___
a.	If yes, does it include:		
1.	Date and time of inspection?	___	___
2.	Name of inspector?	___	___
3.	Notation of observations?	___	___
4.	Date and nature of repairs or remedial action?	___	___
b.	Are there any malfunctions or other deficiencies not corrected? (Use narrative explanation sheet.) (§§264/5.15(c))		

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Personnel Training Yes No

7. Does the owner/operator maintain personnel training records at the facility? (§§264/5.16) ___ ___
How long are they kept? _____

a. If yes, do they include:

1. Job title and written job description of each position? (§§264/5.16(d)) ___ ___
2. Description of type and amount of training? ___ ___
3. Records of training given to facility personnel? ___ ___

Requirements for Ignitable, Reactive, or Incompatible Waste

8. Does facility handle ignitable or reactive wastes? (§§264/5.17) ___ ___

a. If yes, is waste separated and confined from sources of ignition or reaction (open flames, smoking, cutting and welding, hot surfaces, frictional heat), sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat? ___ ___

1. If yes, use narrative explanation sheet to describe separation and confinement procedures.
2. If no, use narrative explanation sheet to describe sources of ignition or reaction.

b. Are smoking and open flame confined to specifically designated locations? ___ ___
c. Are "No Smoking" signs posted in hazardous areas? ___ ___
d. Are precautions documented (Part 264 only)? (§264.17(c)) ___ ___

9. Are containers leaking or corroding? (§§264/5.171) ___ ___

10. Is there evidence of heat generation from incompatible wastes? ___ ___

<u>Section B - Preparedness and Prevention (40 CFR 264/5 Subpart C)</u>

1. Is there evidence of fire, explosion, or contamination of the environment? ___ ___

If yes, use narrative explanation sheet to explain.

2. Is the facility equipped with: (§§264/5.32)

a. Internal communication or alarm system? ___ ___

(i) Is it easily accessible in case of emergency? (§§264/5.34) ___ ___

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		Yes	No
b.	Telephone or two-way radio to call emergency response personnel? (§§264/5.32(b))	___	___
c.	Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment? (§§264/5.32(c))	___	___
d.	Water of adequate volume for hoses, sprinklers, or water spray system? (§§264/5.32(d))	___	___
	Describe source of water:		
3.	Is there sufficient aisle space to allow unobstructed movement of personnel and equipment? (§§264/5.35)	___	___
4.	Has the owner/operator made arrangements with the local authorities to familiarize them with characteristics of the facility? (Layout of facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to roads inside facility, possible evacuation routes.) (§§264/5.37)	___	___
5.	In the case that more than one police or fire department might respond, is there a designated primary authority? (§§264/5.37(a)(2))	___	___
a.	If yes, name primary authority:		
6.	Does the owner/operator have phone numbers of and agreements with State emergency response teams, emergency response contractors, and equipment suppliers? (§§264/5.37(a)(3))	___	___
a.	Are they readily available to all personnel?	___	___
7.	Has the owner/operator arranged to familiarize local hospitals with the properties of hazardous waste handled and types of injuries that could result from fires, explosions, or releases at the facility? (§§264/5.37(a)(4))	___	___
8.	If State or local authorities decline to enter into the arrangements called for under §§264/5.37, is this entered in the operating record? (§§264/5.37(b))	___	___

Section C - Contingency Plan and Emergency Procedures (40 CFR 264/5 Subpart D)

1.	Is a contingency plan maintained at the facility? (§§264/5.51)	___	___
a.	If yes, is it a revised SPCC Plan? (§§264/5.52(b))	___	___
b.	Does contingency plan include:		
1.	Arrangements with local emergency response organizations? (§§264/5.52(c))	___	___
2.	Emergency coordinator's names, phone numbers, and addresses? (§§264/5.52(d))	___	___
3.	List of all emergency equipment at facility and descriptions of equipment? (§§264/5.52(e))	___	___
4.	Evacuation plan for facility personnel? (§§264/5.52(f))	___	___

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		Yes	No
2.	Is there an emergency coordinator on site or on call at all times? (§§264/5.55)	___	___

Section D - Manifest System, Recordkeeping, and Reporting (40 CFR 264/5 Subpart E)

1.	Does facility receive waste from off-site? (§§264/5.71(a))	___	___
a.	If yes, does the owner/operator retain copies of all manifests?	___	___
1.	Are the manifests signed and dated and returned to the generator?	___	___
2.	Is a signed copy given to the transporter?	___	___
2.	Does the facility receive any waste from a rail or water (bulk shipment) transporter? (§§264/5.71(b))	___	___
a.	If yes, is it accompanied by a shipping paper?	___	___
1.	Does the owner/operator sign and date the shipping paper and return a copy to the generator?	___	___
2.	Is a signed copy given to the transporter?	___	___
3.	Has the owner/operator received any shipments of waste that were inconsistent with the manifest (manifest discrepancies)? (§§264/5.72)	___	___
a.	If yes, has he attempted to reconcile the discrepancy with the generator and transporter?	___	___
1.	If no, has Regional Administrator been notified?	___	___
4.	Does the owner/operator keep a written operating record at the facility? (§§264/5.73(a))	___	___

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a. If yes, does it include: (§§264/5.73(b)) Yes No

1. Description and quantity of each hazardous waste received? ___ ___
2. Methods and dates of treatment, storage, and disposal? ___ ___
3. Location and quantity of each hazardous waste at each location? ___ ___
4. Cross-references to manifests/shipping papers? ___ ___
5. Records and results of waste analyses? ___ ___
6. Report of incidents involving implementation of the contingency plan? ___ ___
7. Records and results of required inspections? ___ ___
8. Monitoring or testing analytical data? (Part 264) ___ ___
9. Closure cost estimates and, for disposal facilities, post-closure cost estimates? (Part 264) ___ ___
10. Notices of generators as specified? (§264.12(b)) ___ ___
11. Certification of permittee waste minimization program? (§264.73(b)(9)) ___ ___
12. Land disposal restriction records required by §268.5, §268.6, §268.7(a), and §268.8, as applicable? (§264.73(b)(10)-(16)) ___ ___

5. Does the facility submit a biennial report by March 1 every even-numbered year? (§§264/5.75) ___ ___

a. If yes, do reports contain the following information:

1. EPA I.D. number? (§§264/5.75(a)) ___ ___
2. Date and year covered by report? (§§264/5.75(b)) ___ ___
3. Description/quantity of hazardous waste? (§§264/5.75(d)) ___ ___
4. Treatment, storage, and disposal methods? (§§264/5.75(e)) ___ ___
5. Monitoring data under §265.94(a)(2) and (b)(2)? (§265.75(f)) ___ ___
6. Most recent closure and post-closure cost estimates? (§§264/5.75(g)) ___ ___
7. For TSD generators, description of efforts to reduce volume/toxicity of waste generated, and actual comparisons with previous year? (§§264/5.75(h)) ___ ___
8. Certification signed by owner/operator? (§§264/5.75(j)) ___ ___

6. Has the facility received any waste (that does not come under the small generator exclusion) not accompanied by a manifest? (§§264/5.76) ___ ___

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		Yes	No
a.	If yes, has he submitted an unmanifested waste report to the Regional Administrator?	___	___
7.	Does the facility submit to the Regional Administrator reports on releases, fires, and explosions; contamination and monitoring data; and facility closure? (§§264/5.77)	___	___

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3. Air Emissions Checklist

Section A - Applicability (§§264/5.1030)	Yes	No
1. Does the facility have units permitted under Part 270 or is it permitted under Part 270?	___	___
a. What is the effective date for this facility? _____		
b. For interim status facilities, have these requirements been incorporated into Part B application submittal?	___	___
2. Are there any of the following separation processes at the facility:		
a. Distillation?	___	___
b. Fractionation?	___	___
c. Thin-film evaporation?	___	___
d. Solvent extraction?	___	___
e. Air stripping?	___	___
f. Steam stripping?	___	___
Section B - Waste Streams		
3. Are there waste streams associated with any separation processes that contain 10 ppmw or greater organic concentration? (§§264/5.1032(a))	___	___
a. If they claim waste streams below 10 ppmw, did they use proper means to determine concentration? (§§264/5.1034(d)(1 or 2))	___	___
b. Was date of initial determination before their effective date? (§§264/5.1034(e))	___	___
c. Were other analyses performed annually or upon changes in waste streams? (§§264/5.1034(e)(2 or 3))	___	___
Section C - Facility Emissions Rates		
4. Is the hourly process vent organic emission rate greater than or equal to 3 lb/hr? (§§264/5.1032(a))	___	___
Is the yearly process vent organic emission rate greater than or equal to 3.1 tons/yr? (§§264/5.1032(a))	___	___

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			Yes	No
	a.	If performance tests were made, were they done according to §§ 264/5.1034(c)?	___	___
	b.	If engineering calculations were used, were they done according to §§ 264/5.1035(b)(2)(ii)?	___	___
	c.	Has the owner/operator signed a statement that test conditions portray peak capacity operating conditions? (§§264/5.1035(b)(4)(iv))	___	___
	d.	Were the facility emissions rates determined by the effective date?	___	___

Section D - Facility Emission Rates After Control Devices or Change in Operations

5.	a.	Are the process vent organic emission rates for the facility less than or equal to 3 lb/hr and less than or equal to 3.1 tons/year or are they reduced by 95%? (§§264/5.1032(a))	___	___
	b.	If performance tests were used, were they done in accordance with §§264/5.1034(c) and was the test plan in accordance with §§264/5.1035(b)(3)?	___	___
	c.	If engineering calculations were used, were they in accordance with §§264/5.1035(b)(4)?	___	___
	d.	For facilities without the control devices installed, do they have an installation plan? ((§§264/5.1033(a)(2) and 264/5.1035(b)(1))	___	___
	e.	Will the control devices be installed by 18 months after the effective date? (§§264/5.1033)	___	___

Section E - Reporting (§264.1036)

6.		For facilities with final permits incorporating this rule, have they sent in semi-annual reports of exceedances lasting longer than 24 hours?	___	___

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(Use individual control device worksheets to continue inspection)

Summary Sheet for Control Devices (CD)

Vent #	Control Device	CD #	On Unit #	For Vents #
	Condenser			
	Adsorber (Regen)			
	Adsorber (Nonreg)			
	Process Heater			
	Boiler			
	Catalytic Vapor Incinerator			
	Thermal Vapor Incinerator			
	Air Assisted Flare			
	Steam Assisted Flare			
	Nonassisted Flare			

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Checklist
Condenser
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each condenser in the permit, or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(E)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?

	Yes	No
Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	___	___

2. Monitoring: <u>A and either B or C</u>

	Yes	No
A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	___	___
2. installation point correct	___	___
3. daily inspection (§§264/5.1033(f)(3))	___	___
<u>AND</u>		
B. [Organic compound] in condenser exhaust vent stream		
1. continuously record (§§264/5.1033(f)(2)(vi)(A))	___	___
2. daily inspection (§§264/5.1033(f)(3))	___	___
<u>OR</u>		
C. Temperature monitoring device (§§264/5.1033(f)(2)(vi)(B))		
1. continuously record	___	___
2. two locations:		
a. exhaust vent stream from condenser	___	___
b. coolant fluid exiting the condenser	___	___
3. accuracy:		
a. +/- 1% of temperature being monitored in CO	___	___
b. .5 degrees C (whichever is greater)		
4. inspect daily (§§264/5.1033(f)(3))	___	___
	___	___

3. Repair:

	Yes	No
a. immediately upon daily inspection (§§264/5.1033(f)(3))	___	___

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				Yes	No
4.	Exceedances (§§264/5.1035(c)(4)(vi or vii)):				
	a.	If monitoring [organic] in exhaust:			
		1.	when [organic] greater than 20% above design outlet [organic]	___	___
	b.	If monitoring T:			
		1.	either T exhaust greater than 6 deg above design avg exhaust T <u>OR</u>	___	___
		2.	T coolant out greater than 6 deg above design avg coolant T	___	___
	c.	Cause of exceedance given		___	___
	d.	Measure taken to correct cause provided		___	___
5.	Closed-vent systems associated with the control device (§§264/5.1033(j)):				
	a.	Standard:	No detectable emissions and no visual emissions	___	___
	b.	Monitor:	At facility effective date	___	___
			Annually	___	___
			RA requested times	___	___
	c.	Repair:	Start by 5 days/complete by 15	___	___

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Checklist
Thermal Vapor Incinerator
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each thermal vapor incinerator in the permit or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(B)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?

	Yes	No
Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	___	___

2. Monitoring: A and B

A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	___	___
2. installation point correct	___	___
3. daily inspection (§§264/5.1033(f)(3))	___	___
B. Temperature monitoring device (§§264/5.1033(f)(2)(i))		
1. continuously record	___	___
2. one location:		
a. in combustion chamber downstream of	___	___
3. accuracy:	___	___
a. +/- 1% of temperature being monitored in CO		
b. .5 degrees C (whichever is greater)	___	___
4. inspect daily (§§264/5.1033(f)(3))	___	___
	___	___

3. Repair:

a. Immediately upon daily inspection (§§264/5.1033(f)(3))	___	___

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				Yes	No
4.	Exceedances (§§264/5.1035(c)(4)(i or ii)):				
	a.	If monitoring RT min:			
		1.	when T less than 760 deg. C	___	___
	b.	If standard 95% eff:			
		1.	when T comb. zone greater than 28 deg. C below		
	c.	Cause of exceedance given		___	___
	d.	Measures taken to correct cause provided		___	___
				___	___
5.	Closed-vent systems associated with the control device (§§264/5.1033(j)):				
	a.	Standard:	No detectable emissions and no visual emissions	___	___
	b.	Monitor:	At facility effective date	___	___
			Annually	___	___
			RA requested times	___	___
	c.	Repair:	Start by 5 days/complete by 15	___	___

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Checklist
Catalytic Vapor Incinerator
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each catalytic vapor incinerator in the permit or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(C)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?

	Yes	No
Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	___	___

2. Monitoring: A and B

	Yes	No
A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	___	___
2. installation point correct	___	___
3. daily inspection (§§264/5.1033(f)(3))	___	___
B. Temperature monitoring device (§§264/5.1033(f)(2)(ii))		
1. continuously record	___	___
2. two locations:		
a. vent stream at the nearest feasible point to	___	___
b. vent stream at the nearest point feasible to	___	___
3. accuracy:		
a. +/- 1% of temperature being monitored in CO	___	___
OR	___	___
b. +/- .5 degrees C (whichever is greater)	___	___
4. inspect daily (§§264/5.1033(f)(3))		

3. Repair:

	Yes	No
a. Immediately upon daily inspection (§§264/5.1033(f)(3))	___	___

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				Yes	No
4.	Exceedances (§§264/5.1035(c)(4)(iii)(A or B)):				
	a.	T inlet greater than 28 deg. C below design avg. T inlet or		___	___
	b.	T diff. across bed less than 80% design avg. T difference		___	___
	c.	cause of exceedance given		___	___
	d.	measures taken to correct cause provided		___	___
5.	Closed-vent systems associated with the control device (§§264/5.1033(j)):				
	a.	Standard:	No detectable emissions and no visual emissions	___	___
	b.	Monitor:	At facility effective date	___	___
			Annually	___	___
			RA requested times	___	___
	c.	Repair:	Start by 5 days/complete by 15	___	___

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Checklist
Boiler/Process Heater
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each boiler/process heater in the permit or for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(C)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?

Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c)) Yes ___ No ___

2. Monitoring: <u>A and either B or C</u>

A. Flow indicator (§§264/5.1033(f)(1))
   1. records hourly ___ ___
   2. installation point ___ ___
   3. daily inspection (§§264/5.1033(f)(3)) ___ ___

<u>AND</u>

B. If design heat input capacity less than 44 MW:
   1. temperature monitoring device ___ ___
   2. continuously record ___ ___
   3. one location:
      a. in furnace downstream of combustion zone ___ ___
   4. accuracy:
      a. +/- 1% of temperature being monitored OR ___ ___
      b. .5 degrees C (whichever is greater) ___ ___
   5. inspect daily (§§264/5.1033(f)(3)) ___ ___

<u>OR</u>

C. If design heat input capacity => 44 MW:
   1. continuously record (§§264/5.1033(f)(v)) ___ ___
   2. parameter that indicates good combustion practices ___ ___
   3. inspect daily (§§264/5.1033(f)(3)) ___ ___

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				Yes	No
3.	Repair:				
	a.	immediately upon daily inspection (§§264/5.1033(f)(3))		___	___
4.	Exceedances (§§264/5.1035(c)(4)(iv)):				
	a.	T flame zone > 28 deg. C below design avg. flame zone T		___	___
	b.	Position changes where vent stream is introduced		___	___
	c.	Cause of exceedance given		___	___
	d.	Measures taken to correct cause provided		___	___
5.	Closed-vent systems associated with the control device (§§264/5.1033(j)):				
	a.	Standard:	No detectable emissions and no visual emissions	___	___
	b.	Monitor:	At facility effective date	___	___
			Annually	___	___
			RA requested times	___	___
	c.	Repair:	Start by 5 days/complete by 15	___	___

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Checklist
Flares
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each flare in the permit or, for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(D) and §§264/5.1033(d)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?

	Yes	No
Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c)	___	___

2. Standard (§§264/5.1033(d))

a.	No visible emissions, except for period not to exceed 5 minutes/any consecutive 2 hrs	___	___
b.	Flame present at all times	___	___
c.	If steam assisted:		
1.	Ve < 60 ft/s and Ht ≥ 300 BTU/scf or	___	___
2.	60 ft/s < Ve < 400 ft/sec and Ht > 1000 BTU/scf	___	___
3.	Ve < Vmax < 400 and Ht ≥ 300 BTU/scf	___	___
d.	If air-assisted: Ve< Vmax and Ht => 300 BTU/scf	___	___
e.	If non-assisted:		
1.	Ve < 60 ft/sec and Ht => 200 BTU/scf or	___	___
2.	60 units < Ve < 400 ft/sec and Ht > 1000 BTU/scf	___	___
3.	Ve < Vmax < 400 units and Ht ≥ 200 BTU/scf	___	___

2. Monitoring: <u>A and B</u>

A.	Flow indicator (§§264/5.1033(f)(1))		
1.	records hourly	___	___
2.	installation point	___	___
3.	daily inspection (§§264/5.1033(f)(3))	___	___
B.	Heat sensing device for continuous ignition of pilot flame (§§264/5.1033(f)(2)(iii))		
1.	continuously record	___	___
2.	inspect daily (§§264/5.1033(f)(3))	___	___

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				Yes	No
3.	Repair:				
	a.	Immediately upon daily inspection (§§264/5.1033(f)(3))		___	___
4.	Exceedances (§§264/5.1035(c)(4)(v)):				
	a.	Period when pilot flame is not ignited		___	___
	b.	Cause of exceedance given		___	___
	c.	Measures taken to correct cause provided		___	___
				___	___
5.	Closed-vent systems associated with the control device (§§264/5.1033(j)):				
	a.	Standard:	No detectable emissions and no visual emissions	___	___
	b.	Monitor:	At facility effective date	___	___
			Annually	___	___
			RA requested times	___	___
	c.	Repair:	Start by 5 days/complete by 15	___	___

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Checklist
Carbon Adsorbers - Regenerative
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each in the permit or, for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(D) and §§264/5.1033(d)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?

	Yes	No
Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	___	___

2. Monitoring: A, B, C and D

	Yes	No
A. Flow indicator (§§264/5.1033(f)(1))		
1. records hourly	___	___
2. installation point	___	___
3. daily inspection (§§264/55.1033(f)(3))	___	___
B. [Organic compound] in carbon bed exhaust vent stream		
1. continuously record (§§264/5.1033(f)(2)(vii))	___	___
2. daily inspection	___	___
C. Device to measure a parameter that indicates regeneration on a regular, predetermined time cycle		
1. continuously record	___	___
2. inspect daily	___	___
D. Replace carbon at regular, predetermined time interval that is < carbon service life (§§264/5.1033(g))	___	___

3. Repair:

	Yes	No
a. Immediately upon daily inspection (§§264/5.1033(f)(3))	___	___

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				Yes	No
4.	Exceedances (§§264/5.1035(c)(4)(viii and ix)):				
	a.	If [organic compound]:			
		(i)	[org] exhaust >20% above design exhaust vent	___	___
		(ii)	stream [org]	___	___
	b.	If parameter for regen. on regular cycle			
		(i)	flow continuous past predetermined reg. time?	___	___
	c.	Cause of exceedance given?		___	___
	d.	Measures taken to correct cause for exceedance?		___	___
5.	Have §§264/5.1035(c)(6) or (7) been met?			___	___
6.	Closed-vent systems associated with the control device (§§264/5.1033(j)):				
	a.	Standard:	No detectable emissions and no visual emissions	___	___
	b.	Monitor:	At facility effective date	___	___
			Annually	___	___
			RA requested times	___	___
	c.	Repair:	Start by 5 days/complete by 15	___	___

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Checklist
Carbon Adsorbers - Non-Regenerative
Parts 264/265 Subpart AA

1. Operating Parameters:

List the operating parameters and the limits set for each in the permit or, for interim status facilities, the limits the facility gave based on their engineering calculations (§§264/5.1035(b)(4)(iii)(D) and §§264/5.1033(d)) or performance tests (§§264/5.1035(b)(2)(ii)).

Operating Parameter	Limit	Have they met these limits?

	Yes	No
Is all design documentation, monitoring, operating, and inspection information in the facility operating record? (§§264/5.1035(c))	___	___

2. Monitoring: <u>A and either B or C</u>

A. Flow indicator (§§264/5.1033(f)(1))

1. records hourly	___	___
2. installation point	___	___
3. daily inspection (§§264/5.1033(f)(3))	___	___

<u>AND</u>

B. Organic compound in exhaust vent stream (§§264/5.1033(g))

1. monitor on regular basis	___	___
2. inspect daily or at time < 20% time carbon life		
3. replace carbon when carbon breakthrough	___	___
	___	___

<u>OR</u>

D. Replace carbon at regular predetermined time interval less than design carbon replacement interval

___ ___

3. Repair:

a. Immediately upon daily inspection (§§264/5.1033(f)(3)) ___ ___

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				Yes	No
4.	Exceedances (§§264/5.1035(c)(4)(viii and ix)) for non-regenerators (see §§1035(c)(6), (7))				
	a.	If monitoring [organic] in exhaust:			
		(i)	date and time when monitored for breakthrough and reading	___	___
		(ii)	date when carbon is replaced with fresh carbon	___	___
	b.	Cause of exceedance given		___	___
	c.	Measures taken to correct cause provided		___	___
6.	Closed-vent system:				
	a.	Standard:	No detectable emissions and no visual emissions	___	___
	b.	Monitor:	At facility effective date	___	___
			Annually	___	___
			RA requested times	___	___
	c.	Repair:	Start by 5 days/complete by 15	___	___

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Checklist
Equipment Leak Applications
Parts 264/265 Subpart BB

Section A - Applicability (§§264/5.1050) Yes No

1. Is the facility permitted under Part 270 or does it have units permitted under Part 270? ___ ___

   a. Facility status: interim status or permitted?

   b. What is the effective date for this facility? _____

2. Are any of these units exempt? ___ ___

Section B - Waste Streams (§§264/5.1063(d))

3. Are there waste streams that contain at least 10% organics by weight? ___ ___

   a. Method of determination? Knowledge, ASTM Methods D2267-88, E169-87, E168-88, E260-85 or Method 9060 or 8240 ___ ___

   b. If knowledge, is it documented?

   c. Date of initial determination _____

   d. Dates of other analysis? Change, batch _____
   _____
   _____

4. For each waste stream that does qualify, determine fluid type (gas/vapor service, light-liquid service, heavy liquid service)

   a. Method for determining light liquid service

      1. vapor pressures of constituents from standard texts, or

      2. ASTM D-2879-86

Section C - Facility Operating Record (§§264/5.1064(g))

5. Does the facility have a list of the equipment and identification numbers that are affected by this rule? ___ ___

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		Yes	No
6.	Is there a list of the ID numbers of NDE pumps, valves, and compressors with signature of owner/operator?	___	___
7.	Is there a list of all affected equipment by designation?	___	___
8.	Is there a list of pressure relief devices in gas/vapor service?	___	___
9.	Dates of test for no detection emission equipment? Background level _____ Maximum instrument reading _____		
10.	Is there a list of ID numbers for equipment in vacuum service?	___	___
11.	List of ID numbers of "unsafe-to-monitor" and "difficult-to-monitor" valves, with explanation for each and plan for monitoring or schedule.		
12.	Is there a list of valves using the skip period alternative monitoring schedule, with schedule for monitoring and % leaking determined?	___	___
13.	For dual mechanical seal pumps or compressors with barrier fluid systems with sensors, is the criteria and explanation of the criteria for determining sensor failure given?	___	___
14.	Is there an analysis of design capacity, influent/effluent for each unit subject to these requirements, and an up-to-date analysis either by testing or knowledge to determine if the equipment is covered or not?	___	___

(continued)

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Identification of Equipment Covered by Rule

Equipment	Equipment ID #	Waste Stream #	Fluid
Pumps			
general			
dual mechanical			
NDE (sealless)			
closed vent/control devices			
Compressors			
general			
NDE Sealless			
CV/Control Devices			
Pressure Relief Devices			
general			
CV/Control Devices			
Sampling Connecting Systems			
general			
insitu			
Valves			
general			
leakless (NDE)			
unsafe to monitor			
difficult to monitor			
alter allowable %			
alter skip period LDRP			
Open-ended valves or lines			
Flanges and other connectors			

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Date of Inspection _____
Facility _____
Inspector _____

RECORDKEEPING REQUIREMENTS (§§264/5 (b)(1) and (g))

Unit Number Listed _____
Equipment Identification Number Listed _____
Location at Facility _____
Type of Equipment _____
% by weight of TOC at equipment _____
Fluid State at Equipment _____
Equipment Designation _____
If Closed-Vent/Control Device Used (264/5.1064(b) _____
(2-4) _____
- Implementation Plan _____
- If testing, performance test plan _____
- Design Documentation or Perf. Test Results _____

If Control Device; monitoring, operating, inspection _____
data (264/5.1064(e)) _____

LEAK DETECTION AND REPAIR RECORDKEEPING (§§264/5.1064 (c and d))

Monitoring Equipment Number _____
Monitoring Operators Identification _____
Date of Visual, Audible, Olfactory Indication of Leak _____
Date of Leak Detection _____
Date of Repair Attempt _____
Repair Methods at each attempt _____
Leak "Above 10,000" or Above 500 above background _____
"Repair Delayed" if after 15 days _____
If valve, documentation for repair delay _____
Signature of Person approving delay _____
Expected Date of Repair _____
Date of Successful Repair _____

PHYSICAL INSPECTION

Visual, Audible, or Olfactory Indication of Leak _____
Monitoring Equipment Number _____
Correct Calibration Method _____
Correct Monitoring Techniques Used _____
Method 21 Results _____
Tag on Leaking Equipment _____
If Equipment already had tag on it: _____
- Date Leak Detected _____
- Date of Expected Repair or Actual Repair _____

Equipment Marked as Being in this Program _____

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4. Containers Checklist

Section A - Use and Management (§§264/5.171)	Yes	No
1. Are containers in good condition?	___	___
Section B - Compatibility of Waste With Container (§§264/5.172)		
1. Is container made of a material that will not react with the waste which it stores?	___	___
Section C - Management of Containers (§§264/5.173)		
1. Is container always closed while holding hazardous waste?	___	___
2. Is container not opened, handled, or stored in a manner which may rupture it or cause it to leak?	___	___
Section D - Inspections (§§264/5.174)		
1. Does owner/operator inspect containers at least weekly for leaks and deterioration?	___	___
Section E - Containment (§264.175)		
1. Do container storage areas have a containment system?	___	___
Section F - Ignitable and Reactive Waste (§§264/5.176)		
1. Are containers holding ignitable and reactive waste located at least 15 m (50 ft) from facility property lines?	___	___
Section G - Incompatible Waste (§§264/5.177)		
1. Are incompatible wastes or materials placed in the same containers?	___	___
2. Are hazardous wastes placed in washed, clean containers when they previously held incompatible waste?	___	___
3. Are incompatible hazardous wastes separated from each other by a berm, dike, wall, or other device?	___	___
Section H - Closure (§264.178)		
1. At closure, were all hazardous wastes and associated residues removed from the containment system?	___	___

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5. Generators Checklist

Section A - EPA Identification No.	Yes	No
1. Does generator have EPA I.D. No.? (§262.12)	___	___
a. If yes, EPA I.D. No._____		
Section B - Manifest		
1. Does generator ship waste off-site? (§262.20)	___	___
a. If no, do not fill out Sections B and D.		
b. If yes, identify primary off-site facility(s). Use narrative explanation sheet.		
2. Does generator use manifest? (§262.20)	___	___
a. If no, is generator a small quantity generator (generating between 100 and 1000 kg/month?	___	___
NOTE: SQGs are only exempt if wastes are reclaimed. (See §262.20(e).)		
1. If yes, does generator indicate this when sending waste to a TSD facility?	___	___
b. If yes, does manifest include the following information? (Part 262 appendix)	Yes	No
1. Manifest document no.	___	___
2. Generator's name, mailing address, telephone no.	___	___
3. Generator EPA I.D. no.	___	___
4. Transporter Name(s) and EPA I.D. no.(s)	___	___
5. a. Facility name, address, and EPA I.D. no.	___	___
b. Alternate facility name, address, and EPA I.D. no.	___	___
c. Instructions to return to generator if undeliverable	___	___
6. Waste information required by DOE - shipping name, quantity (weight or vol.), containers (type and number)	___	___
7. Emergency information (optional) (special handling instructions, telephone no.)	___	___
8. Is the following certification on each manifest form?	___	___
"This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable national and international regulations."		

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9. Does generator retain copies of manifests? (§262.40) ___ ___

Yes No

a. 1. Did generator sign and date all manifests? ___ ___

2. Who signed for generator?

Name_____Title_____

b. 1. Did generator obtain handwritten signature and date of acceptance from initial transporter? ___ ___

2. Who signed and dated for transporter? (§262.23)

Name_____Title_____

c. Does generator retain one copy of manifest signed by generator and initial transporter? (§262.40) ___ ___

d. Do returned copies of manifest include facility owner/operator signature and date of acceptance? (§262.40) ___ ___

e. Does generator retain copies for 3 years? (§262.40) ___ ___

Section C - Hazardous Waste Determination (40 CFR 262.11)

1. Does generator generate solid waste(s) listed in Subpart D (List of Hazardous Waste)? ___ ___

a. If yes, list wastes and quantities (include EPA Hazardous Waste No.)_____

_____

2. Does generator generate solid waste(s) listed in Subpart C that exhibit hazardous characteristics (corrosivity, ignitability, reactivity, EP toxicity)? ___ ___

a. If yes, list wastes and quantities (include EPA Hazardous Waste No.)_____

_____

b. Does generator determine characteristics by testing or by applying knowledge of processes?_____

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	Yes	No
1. If determined by testing, did generator use test methods in Part 261, Subpart C (or equivalent)?	___	___
a. If equivalent test methods used, attach copy of equivalent methods used.		
3. Are there any other solid wastes generated by generators?	___	___
a. If yes, did generator test all wastes to determine whether or not they were hazardous?	___	___
1. If no, list wastes and quantities deemed nonhazardous or processes from which nonhazardous waste was produced (use additional sheet if necessary)		

_____
_____
_____

Section D - Pretransport Requirements

	Yes	No
1. Does generator package waste in accordance with 49 CFR 173, 178, and 179 (DOT requirements)? (§262.30)	___	___
2. a. Are containers to be shipped leaking or corroding?	___	___
b. Use additional sheet to describe containers and condition.		
c. Is there evidence of heat generation from incompatible wastes in the containers?	___	___
3. Does generator follow DOT labeling requirements in accordance with 49 CFR 172? (§262.31)	___	___
4. Does generator mark each package in accordance with 49 CFR 172? (§262.32)	___	___
5. Is each container of 110 gallons or less marked with the following label? (§262.32)	___	___

Label saying: HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator name(s) and address(es)_____
_____

Manifest document No. _____

	Yes	No
6. Does generator have placards to offer to transporters? (§262.33)	___	___

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				Yes	No
7.	Accumulation time (§262.34)			___	___
	a.	Are containers used to temporarily store waste before transport?			
		1.	If yes, is each container clearly dated: Also, fill out rest of No. 7 (accum. time) (§262.34(a)(2))	___	___
	b.	1.	Does generator inspect containers for leakage or corrosions? (§265.174 - Inspections)	___	___
		2.	If yes, with what frequency?	___	___
	c.	Does generator locate containers holding ignitable or reactive waste at least 15 meters (50 Feet) from the facility's property line? (§265.176 - Special Requirements for Ignitable or Reactive Wastes)		___	___

NOTE: If tanks are used, fill out checklist for tanks. (See RCRA Hazardous Waste Tank Systems Inspection Manual, OSWER Dir. No. 9938.4)

	d.	Are the containers labeled and marked in accordance with Sections D-3, -4, and -5 of this form?		___	___

NOTE: If generator accumulates waste on site, fill out checklist for General Facilities, Subparts C and D.

	e.	Does generator comply with requirements for personnel training? (Attach checklist for §265.16 - Personnel Training.)		___	___

8. Describe storage area. Use photos and narrative explanation sheet.

Section E - Recordkeeping and Records (40 CFR 262.40)

1.	Does generator keep the following reports for 3 years?			
	a.	Manifest or signed copies from designated facilities	___	___
	b.	Biennial reports	___	___
	c.	Exception reports	___	___
	d.	Test results	___	___
2.	Where are the records kept (at facility or elsewhere)?		___	___

3. Who is in charge of keeping the records?

Name_____Title_____

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Section F - Special Conditions

		Yes	No
1.	Has the primary exporter received from or transported to a foreign source any hazardous waste?	___	___
a.	If yes, has he filed a notice with the Regional Administrator? (§262.53)	___	___
b.	Is this waste manifested and signed by a foreign consignee? (§262.54)	___	___
c.	If generator transported wastes out of the country, has he received confirmation of delivered shipment? (§262.54)	___	___

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6. Ground-Water Monitoring Checklist

Section A - Monitoring System (40 CFR Parts 264/5 Subpart F)	Yes	No
1. Does the facility have a ground-water monitoring system in operation? (§265.90)	___	___
a. If yes, does the system consist of: (§265.91)		
1. Minimally one upgradient monitoring well? (Part 265)	___	___
2. Minimally three downgradient monitoring wells? (Part 265)	___	___
b. Are monitoring wells cased so that the integrity of the boreholes is maintained? (§265.91)	___	___
c. Is a compliance monitoring system installed whenever hazardous waste constituents are detected at the compliance point ? (§264.92)	___	___
d. Is a corrective-action program initiated whenever the ground-water protection standard is exceeded? (§264.100(c))	___	___
e. Is a detection monitoring program instituted in all other cases? (§264.98)	___	___
2. Does the facility have a monitoring and response program? (Part 264)	___	___
a. If yes, is a compliance monitoring system instituted whenever hazardous constituents are detected at the compliance point? (§264.99)	___	___
b. Whenever the ground-water protection standard is exceeded, does facility institute a corrective-action program? (§264.99)	___	___
c. In all other cases, does the facility institute a detection monitoring program? (§264.99)	___	___
Section B - Sampling and Analysis (40 CFR 265.92)		
1. Does the facility obtain and analyze samples from the ground-water monitoring system? (§265.92(a))	___	___
2. Has facility developed and followed a ground-water sampling and analysis plan? (§265.92(a))	___	___

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		Yes	No
a.	If yes, does this plan include procedures and techniques for: (§265.92(a))		
	1. Sample collection?	___	___
	2. Sample preservation?	___	___
	3. Analytical Procedures?	___	___
	4. Chain-of-custody control?	___	___
b.	Does the facility determine the concentration or value of the following parameters in ground-water samples? (§265.92(b))		
	1. Parameters characterizing the suitability of the ground water as a drinking water supply, as specified in Part 265, Appendix 3?	___	___
	2. Parameters establishing ground-water quality (chloride, iron, manganese, phenols, sodium, sulfate)?	___	___
	3. Parameters used as indicators of ground-water contamination (pH, specific conductance, total organic carbon, total organic halogen)?	___	___
c.	Has the owner/operator established initial background concentrations or values of all parameters specified above at least on a quarterly basis? (§265.92)(c))	___	___
d.	Has owner/operator obtained at least four replicate measurements for each sample, and has he determined the initial background arithmetic mean and variance? (§265.92(c))	___	___
e.	After the first year, does owner/operator sample and analyze with the following frequencies: (§265.92(d))		
	1. Samples collected to establish background water quality (from above) at least annually?	___	___
	2. Samples collected to indicate contamination (from above) at least semi-annually?	___	___
	3. Elevation of ground-water surface at each monitoring well at each sampling event?	___	___

Section C - Preparation, Evaluation, and Response (40 CFR 265.93)

1.	Did owner/operator prepare an outline of a ground-water quality assessment program? (§265.93(a))	___	___
a.	If yes, did program determine the following: (§265.93(a))		

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		Yes	No
1.	Whether hazardous waste or hazardous waste constituents have entered the ground water?	___	___
2.	Rate and extent of hazardous waste or hazardous waste constituent migration in groundwater?	___	___
3.	Concentrations of hazardous waste or hazardous waste constituents in ground water?	___	___
b.	For each well, has owner/operator calculated the arithmetic mean and variance, based on four replicate measurements for each sample, and compared the results with initial background mean? (§265.93(b))	___	___
c.	Has owner/operator submitted information documenting any significant increase in comparisons for upgradient wells (or decrease in pH)? (§265.93(c))	___	___
d.	If the comparisons for downgradient wells show a significant increase (or pH decrease), has the owner/operator obtained additional ground-water samples from those downgradient wells in which a significant decrease was detected? (Samples must be split in two, and analyses must be obtained of all additional samples to determine whether the significant difference was a result of lab error.) (§265.93(c))	___	___
1.	If analyses (described above) were performed, and confirmed the significant increase (or pH decrease), did owner/operator notify the Regional Administrator within 7 days?	___	___
2.	If analyses confirmed significant increase (or pH decrease), did owner/operator submit to the Regional Administrator within 15 days after notification (discussed above) a certified ground-water quality assessment program? (§265.93(d))	___	___
a.	If yes, does plan include the following:		
1.	Number, location, and depth of wells?	___	___
2.	Sampling and analytical methods for those hazardous wastes and hazardous waste constituents at the facility?	___	___
3.	Evaluation procedures, including any use of previously gathered ground-water quality information?	___	___
4.	Schedule of implementation?	___	___
3.	Did owner/operator implement the ground-water quality-assessment program and, at a minimum, did he determine the following: (§265.93(d)(4))		

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		Yes	No
	a. Rate and extent or migration of the hazardous waste constituents in the ground water?	___	___
	b. Concentrations of the hazardous waste in the ground water?	___	___
4.	Did owner/operator submit a report to the Regional Administrator containing the requests of the assessment outlined in No. 3 above within 15 days? (§265.93(d)(5))	___	___
5.	Did owner/operator notify the Regional Administrator of reinstatement of indicator evaluation program upon finding that no hazardous waste or hazardous waste constituents had entered the ground water? (§265.93(d)(6))	___	___
6.	If owner/operator determined that hazardous waste or hazardous waste constituents entered the ground water, did he either continue to make the determinations listed in No. 3 above on a quarterly basis until final closure or ground-water quality-assessment plan was implemented prior to post-closure care, or cease to make determinations required in No. 3 above if ground-water quality-assessment plan was implemented during post-closure? (§265.93(d)(7))	___	___
7.	If any ground-water quality-assessment program is implemented to satisfy No. 3 above prior to final closure, has owner/operator completed the program and reported to the Regional Administrator, as outlined in No. 4 above? (§265.93(e))	___	___
8.	If owner/operator does not monitor at least annually to satisfy No. 3 above, does owner/operator evaluate data on ground-water elevation obtained under No. 2e in Section B above to determine whether the requirements for location monitoring wells are satisfied? (§265.93(f))	___	___
	a. If evaluation shows that the requirements for monitoring wells are not satisfied, has owner/operator modified the number location, or depth of the monitoring wells to bring the system into compliance?	___	___

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Section D - Recordkeeping and Reporting (40 CFR 265.94)	Yes	No
1. Unless owner/operator is monitoring to satisfy the requirements of §265.93(d)(4), does owner/operator: (§265.94(a))		
a. Keep records of the analyses required in §265.92(c) and (d), the associated ground-water surface elevations required in §265.92(e), and ground-water surface elevations required in 265.93(b) throughout the active life of the facility and throughout post-closure?	___	___
b. Report the following information to the Regional Administrator: (§265.94(a)(2))		
1. Within 15 days of analysis for each quarterly sampling event, does owner/operator submit results of background concentrations?	___	___
2. Does owner/operator inform the Regional Administrator about any parameters that exceed maximum contaminant levels listed in Appendix III?	___	___
3. (Annually) Does owner/operator report concentrations or values of parameters listed in §265.92(b)(3) for each well, including required evaluations for these parameters under §265.93(b)?	___	___
a. Does owner/operator also identify differences from initial background concentrations found in the upgradient wells no later than March 1 following each calendar year?	___	___
2. Does owner/operator submit results of the ground-water surface elevations under §265.93(f), along with a description of the response, if needed? (§265.94(a)(2))	___	___
3. If ground water is monitored to satisfy requirements of §265.93(d)(4), did owner/operator do the following: (§265.94(b))		
a. Keep records of analyses and evaluations specified in the plan throughout active life and post-closure?	___	___
b. (Annually, until final closure) Submit to the Regional Administrator a report containing the results of the ground-water quality assessment program, including the calculated rate of migration of hazardous waste or hazardous waste constituents by March 1 following each calendar year?	___	___

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Section E - General Requirements Yes No

1. Does facility comply with the following requirements? (§264.97)

   a. Are sufficient wells installed at appropriate locations and depths? ___ ___
   b. Have sampling and analysis techniques been consistent? ___ ___
   c. Have ground-water elevation data been recorded? ___ ___
   d. Have background concentrations been determined? ___ ___

2. If ground water is monitored to satisfy requirements of §265.93(d)(4), owner/operator must:

   a. Keep records of the analyses and evaluations specified in the plan throughout the facility's active life, and, for disposal facilities, throughout post-closure. ___ ___

   b. Report the following ground-water monitoring information:

      1. During the first year when initial background concentrations are being determined, did owner/operator submit values within 15 days after completing analysis? ___ ___
      2. If yes, did owner/operator also submit an identification of any parameters whose concentrations exceed maximum levels in Appendix III? ___ ___
      3. (Annually) Did owner/operator report concentrations or values of the parameters listed in §265.93(b)(2) for each well, along with required evaluations for these parameters under §265.93(b)? ___ ___
      4. Did owner/operator also separately identify any significant differences from initial background concentrations for upgradient wells? ___ ___
      5. Did owner/operator report on the results of ground-water surface elevations (and a description of the results if necessary) by March 1 of the following year? ___ ___

Section F - Detection Monitoring Program (40 CFR 264.98)

1. Has owner/operator established detection monitoring system to provide reliable indications for detection releases? ___ ___

   a. If yes, are the following components included in the system:

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	Yes	No
1. Background values?	___	___
2. Determination of ground-water flow rate?	___	___
3. Determination of ground-water compliance point semiannually?	___	___
4. Determination of statistically significant increases over background concentrations?	___	___
5. Notification to the Regional Administrator if there was a statistically significant increase?	___	___

Section G - Compliance Monitoring Program (40 CFR 264.99)

1. Does facility operate a compliance monitoring program?	___	___
a. Does facility determine concentrations of hazardous constituents at least quarterly?	___	___
b. Does facility determine ground-water flow rate and direction in uppermost aquifer annually? (§264.99(e))	___	___
c. Does facility analyze samples for Appendix IX constituents annually? (§264.99(g))	___	___
d. Does facility make statistically significant increases over background values? (§264.99(h))	___	___
e. If there is an increase, does facility notify the Regional Administrator and establish a corrective-action program? (§264.99(h))	___	___

Section H - Corrective -Action Program (40 CFR 264.100)

1. Does facility follow a corrective-action program that meets the facility's permit requirements?	___	___

* See RCRA Ground-Water Monitoring Systems (OSWER Directive Nos. 9950.2, 9950.3, 9950.4)

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7. Health & Safety Checklist

A. FACILITY NAME EPA ID NO.

B. FACILITY ADDRESS

C. FACILITY OPERATOR INFORMATION

1. Contact Name
2. Phone No.
3. Address (if different from facility)

D. PROCESS UNIT DESCRIPTION (describe type and number of units)

E. TYPE OF OWNERSHIP

__1. Federal __2. State __3. County __4. Municipal __5. Private

F. TYPE OF FACILITY

__1. Treatment __2. Storage __3. Disposal

G. REGULATORY STATUS

__1. Interim Status

__2. Permitted Facility

__3. Part B Permit Appeal Pending (note areas of appeal)

H. PRINCIPAL INSPECTOR

1. Name
2. Title
3. Organization
4. Telephone No.

I. INSPECTION PARTICIPANTS

	Name	Organization	Phone No.
1.			
2.			
3.			
4.			
5.			

NOTE: All inspection participants must have current training certification in accordance with 29 CFR 1910.120.

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
§§264/265.16(a)(1) Outline of Personnel Training Program	Is there an outline of the introductory training program to prepare personnel to operate or maintain the facility in a safe manner? (Attach copy of outline or summarize below.)	___	___	_____
	Is there an outline of the review training program to prepare personnel to operate or maintain the facility in a safe manner? (Attach copy of outline or summarize below.)	___	___	_____
	Does the outline describe how the training will be designed to meet actual job tasks?	___	___	_____
	Is on-the-job training used to meet this requirement?	___	___	_____
§§264/265.16(d)(1) §§264/265.16(d)(2) Job Title/Job Description	Is a job title provided for each employee whose position at the facility is related to hazardous waste management?	___	___	_____
	Is a job description provided for each employee whose position at the facility is related to hazardous waste management?	___	___	_____
§§264/265.16(c) and (d)(3) Training Content, Frequency, and Techniques	Is the personnel training program strictly classroom instruction?	___	___	_____

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
	Is the personnel training program strictly on-the-job training?	___	___	_____
	Does the training program combine classroom instruction and on-the-job training?	___	___	_____
	Is an annual refresher course required for personnel whose positions at the facility are related to hazardous waste management?	___	___	_____
§§264/265.16(a)(2) Training Director	Is the training program directed by a person trained in hazardous waste management? (Summarize qualifications below.)	___	___	_____
§§264/265.16(a)(2) Relevance of Training to Job Position	Are facility personnel instructed in hazardous waste management procedures (including contingency plan implementation) relevant to their positions?	___	___	_____
§§264/265.16(a)(3) Training and Emergency Response	Does the training program include the following emergency response procedures?	___	___	_____
	• Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment?	___	___	_____

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Regulatory Citation/Description	RCRA Checklist Item	Yes	No	Potential Violation
	• Key parameters for automatic waste feed cut-off systems?	___	___	_____
	• Procedures for utilizing communications or alarm systems?	___	___	_____
	• Directions for responding to fires or explosions?	___	___	_____
	• Procedures for groundwater contamination response?	___	___	_____
	• Procedures for conducting shutdown operations?	___	___	_____
§§264/265.16(b),(d)(4) and (3) Implementation of Training Program	Are all facility personnel trained within six months of their employment or assignment to the facility or transfer to a new position?	___	___	_____
	Are facility personnel allowed to work unsupervised before their training program has been completed?	___	___	_____
	Are records maintained which document that the required training has been given to and completed by facility personnel? (Summarize below.)	___	___	_____
§§264/265.33 Testing and Maintenance of Equipment	Does the owner/operator test and maintain (as necessary to assure its proper operation in time of emergency) the following equipment:			
	• All communications or alarm systems?	___	___	_____
	• Fire protection equipment?	___	___	_____
	• Spill control equipment?	___	___	_____
	• Decontamination equipment?	___	___	_____

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
§§264/265.15 General Inspection Requirements	Does the owner/operator maintain a written schedule at the facility for the inspection of:			
	• Monitoring equipment?	___	___	_____
	• Safety and emergency equipment?	___	___	_____
	• Security devices?	___	___	_____
	• Operating and structural equipment?	___	___	_____
	Does the schedule identify the types of problems to look for?	___	___	_____
	Is the frequency of inspection based on the possible deterioration of equipment and the probability of incident?	___	___	_____
	Are areas subject to spills, such as loading and unloading areas, inspected daily?	___	___	_____
	Does the owner/operator maintain an inspection log?	___	___	_____
	If yes, does the log include:			
	• Date and time of inspection?	___	___	_____
	• Name of inspector?	___	___	_____
	• Notations of observations?	___	___	_____
	• Date and nature of repairs or remedial actions?	___	___	_____
	Have any malfunctions or other problems not been remedied? (Summarize below.)	___	___	_____

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
§§264/265.35 Required Aisle Space	Does the facility maintain aisle space to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment?	___	___	_____
	If aisle space is not maintained, has the owner/operator demonstrated to the Regional Administrator that the space is not needed?	___	___	_____
§§264/265.32 Equipment Requirements	Is the facility equipped with the following:			
	• An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel?	___	___	_____
	• A device such as a telephone (immediately available) or handheld two-way radio capable of summoning emergency assistance from police, fire, or state or local emergency response teams?	___	___	_____
	• Portable fire extinguishers?	___	___	_____
	• Fire control equipment (including special extinguishing equipment such as foam, inert gas, or dry chemical)?	___	___	_____
	• Spill control equipment?	___	___	_____
	• Decontamination equipment?	___	___	_____
	• Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems?	___	___	_____

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
§§264/265.17(a) and (b) Requirements for Ignitable, Reactive, or Incompatible Wastes	Does the facility handle ignitable or reactive waste?	___	___	_____
	If yes:			
	Does the owner/operator take the following precautions to prevent accidental ignition or reaction of wastes?			
	• Separate and protect ignitable or reactive wastes from sources of ignition or reaction (open flames, smoking, cutting, welding, hot surfaces, frictional heat, static electrical or mechanical sparks, spontaneous ignition, and radiant heat)?	___	___	_____
	• Does the owner/operator confine smoking and open flames to specially designated locations, while ignitable or reactive waste is being handled?	___	___	_____
	• Are "No Smoking" signs placed conspicuously wherever there is a hazard from ignitable or reactive waste?	___	___	_____
	Does the owner/operator have procedures in place to prevent accidental ignition or reaction of wastes? (Summarize below.)	___	___	_____

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§§264/265.50 through §265.56 Contingency Plan	Does the owner/operator have a Contingency Plan, or a Spill Prevention Control and Counter measures (SPCC) Plan, or some other emergency plan, that is amended for hazardous waste management?	___	___	_____

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Regulatory Citation/Description	RCRA Checklist Item	Yes	No	Potential Violation
	Is a copy maintained at the facility?	___	___	_____
	Has a copy been submitted to all local police and fire departments, hospitals, and State and local emergency response teams?	___	___	_____
	Does the plan describe the control procedures taken in the event of a fire, explosion, or release?	___	___	_____
	Does the plan describe how and when it will be implemented?	___	___	_____
	Does the plan describe arrangements agreed to by local police and fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services?	___	___	_____
	Does the plan list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinators?	___	___	_____
	Is one person named as the primary coordinator?	___	___	_____
	Does the coordinator have the authority to commit the resources to carry out the emergency plan?	___	___	_____
	Does the plan physically describe and identify the location of all emergency equipment at the facility?	___	___	_____
	Does the plan include provisions to ensure that the equipment is cleaned and fit for its intended use before operations are resumed?	___	___	_____
	Does the plan include an evacuation plan for facility personnel?	___	___	_____

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Regulatory Citation/Description	RCRA Checklist Item	Yes	No	Potential Violation
	Does the plan describe:			
	• Signal(s) to be used to begin evacuation?	___	___	_____
	• Evacuation routes?	___	___	_____
	Does the plan describe the methodology for immediate notification of:			
	• Facility personnel?	___	___	_____
	• State or local agencies with designated response roles?	___	___	_____
	Does the plan include procedures for identification of released materials?	___	___	_____
	Does the plan include procedures/criteria to assess possible hazards to human health and the environment that may result from the release, fire, or explosion?	___	___	_____
	Does the plan describe all reasonable measures necessary to ensure that fires, explosions, or releases do not occur, reoccur, or spread to other hazardous waste at the facility?	___	___	_____
	Does the plan describe procedures to monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment if the facility stops operation in response to a fire, explosion, or release?	___	___	_____

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
§§264/265.37 Necessary Agreements with Local Authorities	Has the owner/operator made the following arrangements:			
	• Familiarized police, fire departments, and emergency response teams with the layout of the facility and associated hazards?	___	___	_____
	• Designated one police and fire department with primary emergency authority when more than one might respond?	___	___	_____
	• Agreements with State emergency response teams, contracts, and equipment supplies?	___	___	_____
	• Familiarized local hospitals with the properties of waste handled at the facility and the types of injuries or illness that could result?	___	___	_____
	• Where authorities decline to enter into such arrangements, has the owner/operator documented the refusal?	___	___	_____
		___	___	_____
	Are containers holding hazardous waste closed during storage, except when waste is added or removed? (If no, attach narrative.)	___	___	_____
Subpart I - Containers §§264/265.173(a),(b) Management of Containers	Check here if containers are present at the facility. If no, go to Subpart J.	___	___	_____
	Does the facility have procedures to ensure that containers holding hazardous waste are not opened, handled, or stored in a manner that may rupture the container or cause it to leak?	___	___	_____

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§§264/265.177 Special Requirements for Incompatible Wastes	Does the facility have procedures to ensure that incompatible wastes are not placed in the same containers or in unwashed containers that previously held incompatible waste?	___	___	_____

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
	Are storage containers holding a hazardous waste that is incompatible with waste or other materials stored in nearby containers, piles, open tanks, or surface impoundments, separated from the other materials or protected from them by means of a dike, berm, wall, or other device?	___	___	_____
Subpart J - Tanks §§264/265.198(a)(1 and 2) Special Requirements for Ignitable or Reactive Wastes	Are ignitable or reactive wastes treated, rendered, or mixed before or immediately after placement in the tank so that:			
	• The resulting mixture no longer meets the definition of an ignitable or reactive waste?	___	___	_____
	• Section 264.17(b) is complied with?	___	___	_____
	Are wastes stored or treated in such a way that they are protected from any material or conditions that may cause the wastes to react or ignite?	___	___	_____
	Note: Facilities do not need to comply with the above if the tank system is used for emergency purpose only.	___	___	_____
§§264/265.199(b) Incompatible Wastes	Before a hazardous waste is stored in a tank that previously held an incompatible waste or material, is it thoroughly decontaminated?	___	___	_____
§265.200(a)(b) Waste Analysis (Specific requirement for interim status facilities)	Is a waste analysis or trial treatment conducted whenever a tank system is used to store a hazardous waste substantially different from waste previously treated or stored; or used to treat chemically a hazardous waste with a substantially different process than any previously used in that system?	___	___	_____

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Regulatory Citation/Description	RCRA Checklist Item	Yes	No	Potential Violation
	If no to §265.200(a): Has written, documented information on similar waste under similar operating conditions been obtained to show that the proposed treatment or storage will meet the requirements of §265.194(a)?	___	___	_____
Subpart O - Incinerators §§264/265.347(b) Monitoring and Inspections	Is the complete incinerator and associated equipment (pumps, valves, etc.) inspected daily for leaks, spills, and fugitive emissions?	___	___	_____
§264.347(c) (Not applicable to interim status facilities)	Are emergency waste cut-off systems and associated alarms tested weekly?	___	___	_____
§264.345(d) (Not applicable to interim status facilities)	Is the incinerator combustion zone sealed?	___	___	_____
	If this is a rotary kiln incinerator, is there black smoke or evidence of emissions?	___	___	_____
	Is the combustion zone pressure lower than atmospheric pressure? If no, what is the reading? (Explain below.)	___	___	_____
	If the pressure is not measured in the combustion zone, what alternative methods are used equivalent to maintenance of combustion zone pressure? (Explain below.)			

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Regulatory Citation/Description	**RCRA Checklist Item**	**Yes**	**No**	**Potential Violation**
§264.345(e) Operating Requirements (Not applicable to interim status facilities)	Determine whether there is a functioning system to automatically cut off waste feed to the incinerator when operating conditions deviate from the permitted levels? (Optional: Facilities can simulate operating conditions to trigger the shut-off ...inspector should observe actual shut-off)	___	___	_____
Part 264/265 Unplanned Incinerator Stack Emissions	How many times did the emergency bypass stack open during the past 6 months of operation?	___ Times		
	How long did it last each time in average?	___ Minutes		
	How many times was the automatic waste feed cut-off system activated during the past 30 days of operation?	___ Times		
	Due to CO excursion?	___ Times		
	Due to Temperature excursions?	___ Times		
	Due to Waste feed excursions?	___ Times		
	Other causes?	___ Times		

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8. Incinerator Checklist

I. Background

The attached set of forms identify activities appropriate for compliance inspection of RCRA incinerators. The set of checklists includes:

- Checklist No. 1 - Permit and Operating Conditions
- Checklist No. 2 - Visual Assessment and Audit Activities for an "In-Depth" Inspection
- Checklist No. 3 - Visual Assessment and Audit Activities for a "Walk-Through" Inspection

The checklists are designed to be used for two types of inspection -- a "walk-through" inspection requiring about 3 to 4 hours and an "in-depth" inspection requiring 1 to 5 days. The following usage of checklists is suggested:

"Walk-through" Inspection	"In-depth" Inspection
Checklist No. 1	Checklist No. 1
Checklist No. 3	Checklist No. 2

II. Notes on Individual Checklists

- Checklist No. 1 is based on EPA guidance (June 1988 draft of "Guidance on Trial Burn Reporting and Setting Permit Conditions"). Blanks are included for additional parameters. Multiple sets of Checklist No. 1 may be used to evaluate operations at various selected times during a multi-day "in-depth" inspection or to evaluate past operations at selected times using facility records. All calculations must be documented in extra calculation pages. Note in the checklist the page numbers of the documented calculations.

- Checklist No. 2 is for "in-depth" inspections only. Part I is highly subjective, relying on judgment. Part II includes activities that may require scheduling to avoid interferences with facility operations (e.g., testing of automatic waste feed cutoff) and arranged meetings with facility managers and laboratory staff.

- Checklist No. 3 includes visual assessment and audit items of highest priority from Checklist No. 2. This checklist is intended for "walk-through" inspections only. Activities may require scheduling to avoid interference with facility operations.

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III. General Instructions

- Fill in permit conditions in advance; label units correctly.
- Before conducting an inspection, review the most recent plant inspection report.
- Use calculation sheets if observed values must be converted to the units of the permitted values.
- Note ranges of values if significant fluctuations are noted during the observation period.
- Use extra pages as necessary.
- Fill out all information as it is collected; do not depend on your memory. If information is not available, indicate that on the form.
- Document the sources of all information, especially if it pertains to potential permit violations. For example, did someone tell you something, did you personally observe it, or did you read it in a file?

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RCRA INCINERATOR INSPECTION
Checklist No. 1 -- Permit and Operating Conditions

I. Essential Information

Facility__ EPA ID No. _____

Address _____
_____
_____

Facility Staff Involved (and position): _____
_____
_____
_____
_____

Primary Contact _____
Phone No. _____

Names of Inspectors _____
(and offices) _____
_____

Dates of Visit _____
Time of Arrival _____

Incinerator(s) Inspected _____
_____
_____

Permit Identification and Date of Issue _____
(Date of most recent modification) _____

Operational Status of Incinerator(s) _____
_____
_____
_____

Date of Last Inspection _____
(by State) _____
(by EPA) ____

Pending Enforcement Action(s) _____
_____
_____

Previous Violation(s)_____
_____
_____

Checklists Attached: No. 1 _____ (number of sets _____)
No. 2 _____
No. 3 _____

(Attach additional pages if necessary)

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(Checklist No. 1)

Description of incineration system (a block diagram showing the types and arrangement of equipment is recommended).

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(Checklist No. 1)

II. Comparison of Permit and Operating Conditions

Date _____
Time Readings Began _____
Time Readings Ended _____

A. Permit Operating Parameters	Permitted Maximum (units)	Permitted Minimum (units)	Observed Reading(s) (units)	Calculated Value
1. Temperature measured at each combustion chamber exit				
a. Primary	_____	_____	_____	NA
b.	_____	_____	_____	NA
c. Secondary	_____	_____	_____	NA
[1]without flame				
[2]with flame				
2. CO emissions measured at the stack or other appropriate location (Location:_____)	_____	_____	_____	_____
	_____	_____	_____	
	_____	_____		

	Yes	No
• Does CO monitor automatically correct all readings to 7% O_2 based on actual O_2 stack concentration?	___	___
• Does permit require O_2 correction?	___	___
• Does permit specify the correction factor to be used? If so, list it: _____	___	___
• Date correction factor last determined: _____		
• Describe any changes made in O_2 correction factor _____ _____		
• Permit-specified frequency for verifying O_2 correction factor: _____		
• If a 60-minute rolling average is required, does the observed reading reflect a 60-minute rolling average?	___	___
Applicable?	___	___
If no, attach data and calculate the average _____		

Total Hydrocarbons as methane:	_____	_____	_____	_____
	_____	_____	_____	_____
3. O_2 emissions (location): (_____)	_____	_____	_____	_____
		_____	_____	_____
4. Flue gas flow rate or velocity measured at stack		_____	_____	_____
		_____	_____	_____

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(Checklist No. 1)

Permit Operating Parameters	Permitted Maximum (units)	Permitted Minimum (units)	Observed Reading(s) (units)	Calculated Value

5. Feed rate of each waste stream to each combustion chamber.

Containerized waste feeds covered under item 10? Yes ___ No ___

Chamber	Waste Stream (Name or identifier)				
a.					
b.					
c.					
d.					
e.					
f.					

6. Pressure in primary chamber: _____ _____ _____ _____

7. Air pollution control:

a.	ratio of the steam flow to the hydrosonic scrubber (pounds/hr) to stack gas flow rate (ACFM)	NA			
b.	pH of liquid to the packed tower				
c.	pH of liquid to hydrosonic scrubber				
d.	conductivity of the scrubber liquor blow down				
e.	liquid flowrate to the packed tower				
f.	liquid flowrate to the hydrosonic scrubber				
g.	inlet temperature to the packed tower				

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(Checklist No. 1 - Cont'd)

Permit Operating Parameters	Permitted Maximum (units)	Permitted Minimum (units)	Observed Reading(s) (units)	Calculated Value
10. Additional permit conditions Monitor the following process parameters in addition to those previously mentioned:				
a. quench water flow				
b. flue gas flow rate				
c. oxygen flow rate				

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Checklist No. 2 -- Visual Assessment and Audit Activities for an "In-Depth" Inspection

A. Observation of Equipment/Function [1. etc. = Problem note (see below)]

	Leaks/ Emissions	Seals	Structural Integrity	Proper Function	Safe Issue
-- Waste unloading					
-- Waste storage/blending					
-- Waste handling/piping					
-- Waste feed/fuel systems					
-- Combustion chambers/burners					
-- Kiln drive system					
-- Combustion air fans					
-- Pollution control devices					
• Packed Tower Absorber					
• Hydrosonic Scrubber					
-- Emergency vent stack (dump stack)					
-- Process instrumentation					
-- Ash handling system					
-- Scrubber effluent handling					
-- _____					

Notes

1.

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(Checklist No. 2 - Cont'd)

B. Observed Operations [Give brief description of problem, or reference a Note below (1,2, etc.)]

	Status/Comments
-- Records of permit parameters (complete, accessible)	_____
-- Proper identification of date, time, and units on strip charts	_____
-- Records of waste acceptance	_____
- handling	_____
- characterization	_____
-- Log of inspections	_____
- calibrations	_____
- maintenance	_____
-- Subjective evaluation of operators	_____
-- Staff knowledge of emergency procedures contingencies	_____
-- Handling/fate of residuals	_____
• Primary chamber ash	_____
• Scrubber effluent (_____)	_____
• Scrubber effluent (_____)	_____
• _____	_____
• _____	_____
-- Appearance of stack emissions	_____
-- _____	_____
-- _____	_____
-- _____	_____

Notes

1.

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(Checklist No. 2 - Cont'd)

C. General Quality of Operation

Comments

-- Odors

-- Housekeeping

- Storage areas
- Waste feed areas
- Control room
- General facility
- Laboratory

-- _____

-- _____

-- _____

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(Checklist No. 2 - Cont'd)

2. Observe the operation of the automatic waste feed cutoff system in response to simulated upset conditions for each automatic cutoff condition required in the permit [Note: At least one test must involve an actual shutdown. *S = Simulated, A = Actual]

Automatic Cutoff Conditions	Permit Limits		Observed		S or A*	Adequate Function?
	Value	Time Lag	Value	Time Lag		
• Minimum temperature						
Chamber (kiln)						
Chamber (kiln)						
Chamber (2nd)						
• Maximum CO						
• Other CO limit						
• Maximum flue gas flow rate/velocity						
• Maximum feed rate (stream)						
• Pressure in primary combustion chamber						
• Air pollution control: quench water	none					
Comb Eff						
Stack O_2						
Loss of Fan						
Loss of Power						

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(Checklist No. 2 - Cont'd)

3. Review documentation of the most recent calibration of the monitoring instrumentation for all permit operating parameters specified in the permit. Discuss procedures used with the facility staff. (Provide notes for each parameter -- attach note pages as applicable.)

System	Frequency of Calibration	Date of Last Calibration	Stat
• Temperature			
Kiln			
Secondary Chamber			
Packed Tower			
• Flow rates			
Oxygen			
Packed Tower Water			
Hydrosonic Scrubber Water			
Water Flow to Quench System			
Flue Gas Flowrate			
Waste Feed Rate			
Steam Feed Rate			
• Steam Drum Water Level			
• Packed Tower pH			
• Hydrosonic Scrubber pH			

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(Checklist No. 2 - Cont'd)

B. Audits of Waste Characterization and Handling [1, etc. = Problem note (see below)]

		Status
1.	Review of Waste Characterization	
	a. Analysis of appropriate parameters	
	b. Frequency of analysis	
	c. Adequate analysis documentation (subjective)	
2.	Review of Waste Handling Documentation	
	a. Waste acceptance	
	-- Manifest/Logs	
	-- "Fingerprint" analysis	
	b. Blending/feeding logs	
3.	Review of on-site laboratory (optional)	
	a. Calibration records	
	b. Maintenance records	
	c. Availability of Analytical and QA/QC Procedures	
C.	Review of Other Records Required by the Permit	
1.	Records of Dump Stack Openings	
	- Openings documented: _____ incidents since _____ (date of last inspection) or _____ in last 12 months reported to _____ state or _____ EPA	
	- Temperature maintained during openings	
	- Minimum airflow maintained during openings	
	- Causes _____	
	- Corrective actions _____	
2.	Records of Automatic Waste Feed Cutoff (AWFCO)	
	- Documented	
	- Frequency of cutoff incidents (_____ per month or _____ per day (average of _____ days))	
	- Major causes for AWFCO _____	

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(Checklist No. 2 - Cont'd)

3. Inspection Logs/Calibration Records

- Complete _____
- Adequate schedule _____
- Recurring problems _____

_____

_____

4. Maintenance Records

- Timely corrective action _____
- Complete _____
- Routine maintenance performed on schedule _____
- Frequency? _____
- Note any recurring maintenance problems _____

_____

_____

- List any equipment replaced since last inspection (obtain manufacturer's specifications)

_____

_____

_____

D. Audit of Waste Analysis (optional)

- Provide check samples for analysis by the facility lab or obtain sample splits for return to agency labs (or agency contractor lab)
- Document the origin of each sample
- Identify the parameters for analysis, analysis methods, sampling handling/storage limitations, and any essential QA/QC requirements to be completed by the facility's lab and the agency lab (if applicable)

Notes:

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Checklist No. 2 - Incinerator Specific Checklist (Optional) to Curb Fugitive Emissions

The following checklist (optional) contains the protocol to assess the procedures and devices used to control fugitive emissions from the material handling aspects of incineration facilities. Recognizing the fact that the majority of fugitive air emissions from a hazardous waste incineration facility emanate from the material handling phase of its operation, and that a RCRA incinerator permit traditionally did not address the subject, it is imperative that the facility take appropriate measures to alleviate the potential risk of injury to public health and the environment.

Regulatory Citation & Description	RCRA Checklist Item	Yes	No
	Waste Unloading/Transfer Operation		
	Is there a vent gas emission control device in place for loading/unloading liquid transport vehicles?	___	___
	If yes, describe _____		
§264.31 and §265.31	Is there a fugitive air emission control device, or procedures, in place for the following?		
	• Flex hose couplings/drip pans?	___	___
	If yes, describe: _____		
	• Cleaning/replacing liquid filters and strainers?	___	___
	If yes, describe: _____		
	• Loading/unloading bulk solid wastes?	___	___
	Is there a vent gas emission control device for liquid waste storage tanks?	___	___
	If yes, describe: _____		
	Is there a fugitive air emission monitoring device in the loading/unloading areas?	___	___
	If yes, describe: _____		

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Regulatory Citation & Description	RCRA Checklist Item	Yes	No
	Size Reduction/Shredding Operation		
	Is there a fugitive air emission monitoring device in the following areas?		
	• Container repackaging area?	___	___
	• Drum/container shredding area?	___	___
	Is there a fugitive air emission control device, or procedures, in place for the following areas?		
	• Container repackaging area?	___	___
	If yes, describe: _____		
	• Drum/Container shredding area?	___	___
	If yes, describe: _____		
	Incinerator Feeding/Residue Removal		
	Is there a fugitive air emission control device, or procedures, in place for the following?		
	• Cleaning/replacing liquid strainers or filters?	___	___
	If yes, describe: _____		
	• Ash removal/accumulation area?	___	___
	If yes, describe: _____		
	• Scrubber blowdown/recycle tank?	___	___
	If yes, describe: _____		

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Regulatory Citation & Description	RCRA Checklist Item	Yes	No
§264.31 §265.31 §264.340	Unplanned Incinerator Stack Emissions		
	• How many times did the emergency bypass stack open during the past 6 months of operation?	____Times	
	How long did it last each time, on average?	____Minutes	
	• How many times was the automatic waste feed cut-off system activated during the past 30 days of operation?	____Times	
	Due to CO excursion?	____Times	
	Due to temperature excursion?	____Times	
	Due to waste feed excursion?	____Times	
	Other causes?	____Times	

(Note: The opening of the emergency bypass stack and the activation of the automatic waste feed cut-off system, normally implies that the incinerator has failed to mee one or more of the performance standards identified in the Federal incinerator rule, 40 CFR Part 264, Subpart O. They may also imply that the incinerator has violated the operating limits provided in the RCRA permit, depending on how the operating condition was written in the permit. If the permit was written to prohibit the Permittee from feeding waste into the incinerator when the operating conditions deviate from the permit limits, then the activation of automatic waste feed cut-off system would not imply violation of the permit conditions. On the other hand, if the permit was written to prohibit the facility from incinerating hazardous wastes, when the operating conditions deviate from the permit limits, then the Permittee has clearly violated the permit conditions, when the waste feed cut-off was activated.)

General Ambient Air Monitoring	Yes	No
• Does the facility monitor ambient air?	___	___

If yes, describe location, frequency, and monitoring parameters _____
_____
_____

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9. Land Disposal Restrictions Checklist

I. GENERAL INFORMATION

Facility: _____

U.S. EPA ID No.: _____

Street: _____

City: _____ State: _____ Zip: _____

Telephone: _____

Inspection Date: __/__/__ Time: ___(am/pm)

Weather Conditions: _____

	Name	Agency/Title	Telephone
Inspectors:	_____	_____	_____
	_____	_____	_____
Facility Representatives:	_____	_____	_____
	_____	_____	_____

See Appendix B to determine which of the following LDR waste codes exist in the following categories at the facility:

	Generate	Transport	Treat	Store	Dispose
F001-F005 Solvents					
F020-F023 and F026-F028					

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California List

First Third
(40 CFR 268.101)

Second Third
(40 CFR 268.11)

Third Third
(40 CFR 268.12)

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INSPECTION SUMMARY

Processes That Generate LDR Wastes:

LDR Waste Management:

Summary:

Signature:

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II. WASTE IDENTIFICATION

A. List waste codes which the facility handles in each of the following LDR categories*:

1. F001 through F005 spent solvents (§268.30):

   _____

2. F020-F023 and F026-F028 dioxin-containing wastes (§268.31):

   _____

3. California List Wastes (§268.32) (See Appendix A):

   _____

4. First Third Wastes (§268.33):

   _____

5. Second Third Wastes (§268.34):

   _____

6. Third Third Wastes (§268.35)**:

   _____

*See Appendix B.

** Note: Effective 09/25/90, large quantity generators and TSDs were required to use the toxicity characteristic leaching procedure (TCLP) instead of the extraction procedure (EP) for determining the toxicity characteristic (TC). Small quantity generators must comply with this new requirement by 03/29/91. The LDR applies to EP toxic wastes and not to "newly identified" wastes which exhibit TC. TC wastes will be regulated under 40 CFR Part 268 only after they have been designated with LDR treatment codes or standards. Even if the former EP waste is also TC characteristic, it is only subject to LDR if it continues to fail the EP. If it fails the TC, it will not be subject to LDR until EPA has established a new treatment standard.

B. Waste Code Determination

1. Have all waste codes been correctly identified for purposes of compliance with §§268.9 and 262.11.*

   Yes____ No_____

   If no, list below:

   Assigned Classification Correct Classification

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* Areas of concern (See Section 2.0) include: California List/waste categories with more stringent treatment standards; listed/characteristic; multi-source/single-source leachate; P and U waste codes/F and K wastes; and waste code carry through principle.

Comments:_____

2. Have both the listed and characteristic waste code been assigned, where a listed waste exhibits a characteristic? (§268.9(a))

Yes ___ No ___ NA ___

Comments:_____

3. Is the waste classified as D001, non-High TOC Ignitable Liquids Subcategory? If so, has the waste been treated by INCIN, FSUBS, or RORGS? Has the generator determined the underlying hazardous constituents (as defined in §268.2) that are reasonably expected to be present in the waste? (§268.9(a))

Yes ___ No ___ NA ___

Comments:_____

4. Is the waste classified as D002, and prohibited under §268.37? Has the generator determined the underlying hazardous constituents (as defined in §268.2) that are reasonably expected to be present in the waste?

Yes ___ No ___ NA ___

Comments:_____

5. Has multi-source leachate been assigned the F039 waste code?* (§261.31)

Yes ___ No ___ NA ___

* Leachate derived exclusively from F020-F023 and/or F026-F028 dioxin wastes retains the individual waste codes.

If yes, was single-source leachate combined to form multi-source leachate? (55 FR 22623)

Yes ___ No ___

Comments:_____

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C. Does the facility handle the following wastes (national capacity variances)?

1. Debris contaminated with wastes that had treatment standards set in the Third Third rule based on incineration, mercury retorting, or vitrification. See Appendix A (expires - 05/08/94). (§268.5)

   Yes ___ No ___ List _____

2. Inorganic solid debris as defined in §268.2(g)*; includes chromium refactory bricks carrying EPA Hazardous Waste Nos. K048-K052 (expires - 05/08/94). (§268.35(c))

   Yes ___ No ___ List _____

   *Note: Incorrect reference (§268.2(a)(7)) in Third Third rule.

3. Debris contaminated with wastes listed in §268.12, and/or debris contaminated with any characteristic wastes for which treatment standards are established in Subpart D of Part 268 (expires 05/08/94). (§268.35(e)(1))*

   Yes ___ No ___ List _____

   *Note: Generator must demonstrate a good faith effort to locate treatment capacity suitable for its waste, utilize such capacity if found available, or file a report as required by §268.5(g) by August 12, 1993 or within 90 days after the hazardous waste is generated (whichever is later) describing the generator's efforts to locate treatment capacity.

4. Mixed radioactive hazardous debris contaminated with wastes listed in §268.12 and mixed with radioactive hazardous debris contaminated with any characteristic waste for which treatment standards are established in 40 CFR Part 268, Subpart D (expires 05/08/94). (§268.35(e)(2))*

   Yes ___ No___ List _____

   *Note: Generator must demonstrate a good faith effort to locate treatment capacity suitable for its waste, utilize such capacity if found available, or file a report as required by §268.5(g) by August 12, 1993 or within 90 days after the hazardous waste is generated (whichever is later) describing the generator's efforts to locate treatment capacity.

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III. GENERATOR REQUIREMENTS

A. Wastewater/Non Wastewater Category and Treatability Group/Treatment Standard Identification*

*Note: This information is generally available on LDR notifications. If not, waste profile data and other documentation should be checked.

1. F001-F005 Spent Solvent Wastes: Does the generator correctly determine the appropriate Wastewater/Non Wastewater Category and treatment standard for each F-solvent?

   Yes ___ No ___ NA ___

   If available, list each waste code and check the correct treatability group.

Waste Code	Wastewater*	Non Wastewater
_____	_____	_____
_____	_____	_____
_____	_____	_____

   Comments _____

   * Less than 1 percent by weight total organic carbon (TOC), or less than 1 percent by weight total F001- F005 solvent constituents listed in §268.41, Table CCWE. (§268.2(f)(1))

2. F020-F023 and F026-F028 Dioxin Wastes: Does the generator correctly determine the appropriate treatability group/treatment standard for each dioxin waste?

   Yes ___ No ___ NA ___

   If yes, list each waste code and check the correct treatability group.

Waste Code	Wastewater*	Non Wastewater
_____	_____	_____
_____	_____	_____
_____	_____	_____

   Comments _____

   * Less than 1 percent TOC by weight and less than 1 percent total suspended solids (TSS) by weight. (§268.2(f))

3. First, Second, and Third Third Wastes:

   a. Does the generator correctly determine the appropriate treatability group/treatment standard for each waste?

      Yes ___ No ___ NA ___

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If available, list each waste code and check the correct treatability group:

Waste Code	Subcategory	Wastewater*	Non Wastewater
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

* Less than 1 percent TOC by weight and less than 1 percent total suspended solids (TSS) with the following exceptions: K011, K013, and K014 wastewaters (as generated) -- less than 5 percent by weight TOC and less than 1 percent by weight TSS; K103 and K104 wastewaters (as generated) - less than 4 percent by weight TOC and less than 1 percent by weight TSS. (§268.2(f)(2) and (3))

Comments _____

b. Do the assigned treatment standards for listed wastes cover constituents that may cause the waste to exhibit any characteristics? (§268.9 (b))

Yes ___ No ___ NA ___

c. Does the generator specify alternative treatment standards for lab packs?* (268.42(c))

Yes ___ No ___ NA ___

*Use of the alternative treatment standards is not required. (55 FR 22629)

If yes, do lab packs only contain the following wastes?* (§268.42(c)(2))

___ Organometallics: Part 268, Appendix IV constituents
___ Organics: Part 268, Appendix V constituents

* Unregulated wastes and hazardous wastes which meet treatment standards may be commingled in the appropriate Appendix IV and V lab pack. (55 FR 22629)

d. Does the generator specify the treatment standards for the relevant F039 multi-source leachate constituents?*

Yes ___ No ___ NA ___

*Use of the alternative treatment standards is required. (55 FR 22619)

4. California List Wastes: Has the generator correctly identified the wastewater/non wastewater category and treatment standard/prohibition level for the following wastes? (55 FR 22675)

a. Liquid hazardous wastes containing PCBs $\geq$50 ppm (268.32(a)(2))

Yes ___ No ___ NA ___

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If yes, check the appropriate category (treatability group) (see §268.42(a)(1)):

___ 50 to 500 ppm PCBs
___ ≥500 ppm PCBs

b. Listed or characteristic wastes containing ≥1,000 mg/l (liquids) or ≥1,000 mg/kg HOCs, (non-liquids), which are not declared hazardous by the HOC content (55 FR 22675)

Yes ___ No ___ NA ___

If yes, check the appropriate category (see §268.42(a)(2)):

___ Dilute HOC wastewater with 1,000 mg/l to 10,000 mg/l HOCs) (268.32(a)(3))
___ All other HOCs greater than or equal to the prohibition level of 1,000 mg/l (liquids) or mg/kg (non-liquids) (268.32(e)(1) and (2))

c. Liquid hazardous wastes that exhibit a characteristic and also contain ≥134 mg/l nickel and/or ≥130 mg/l thallium (55 FR 22675)

Yes ___ No ___ NA ___

5. National Capacity Variance Wastes: Have all applicable California List prohibitions been identified for wastes covered under national capacity variances? (See Appendix A.)

Yes ___ No ___ NA ___

If a waste stream contains a mixture of wastes, and a variance only applies to some of the waste codes, has the generator identified all applicable treatment standards and California List prohibitions? (See Appendix A.)

Yes ___ No ___ NA ___

If California List prohibitions apply to wastestreams managed by the generator, complete the following table for each waste code, noting the date on which relevant national capacity variances expire.

Waste Code	Cal. List Applicability	Expiration Date
_____	_____ _____	___/___/___
_____	_____ _____	___/___/___
_____	_____ _____	___/___/___

Comments _____

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6. Treatment standards expressed as required technologies: Has the generator specified an alternative method to that required in §268.42?

Yes ___ No ___ NA ___

If yes, list the waste code, the technology specified in §268.42, the alternative method, and documentation of approval. (§268.42(b))

Waste Code	Required Technology	Alternative Method	Approval

Comments _____

7. Does the generator mix multiple restricted wastes all containing a common constituent of concern, but which have different treatment standards?

Yes ___ No ___

If yes, did the generator select the most stringent treatment standards? (§§268.41(b) and 268.43(b))

Yes ___ No ___

Comments _____

B. Waste Analysis

1. Does the generator determine whether restricted wastes exceed treatment standards/prohibition levels at the point of generation?* (§268.7(a) (53 FR 31208))

Yes ___ No ___

* Note: This determination may be made at the point of disposal if the waste only has a prohibition level in effect (52 FR 25765).

If no, does the generator ship all restricted wastes as not meeting treatment standards?

Yes ___ No ___

Comments _____

2. Which of the following analytical methods does the generator employ?*

*Note: A "No" answer to applicable questions b through d does not necessarily constitute a violation. However, knowledge of waste is rarely adequate if a generator certifies that treatment standard criteria have been met.

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a. Knowledge of waste:

Yes ___ No ___

If yes, list the wastes for which applied knowledge was used and describe the basis of determination. Attach documentation. (§268.7(a)(5))

_____

_____

b. TCLP*: Are wastes with treatment standards specified in §268.41 analyzed using TCLP?** (BDAT*** = stabilization/immobilization technology)

Yes ___ No ___ NA ___

*TCLP = Toxicity Characteristic Leaching Procedure (Part 268, Appendix I, EPA Test Method 1311).

**See Section 268.40(a) for options for using TCLP or EP test methods.
***BDAT = best demonstrated available technology. See Appendix A.

If yes, list the wastes for which TCLP was used and provide the date of last test, identify the frequency of testing, and note any problems. Attach test results. (§268.7(a)(5))

_____

_____

c. Total constituent analysis: Are wastes with treatment standards specified in §268.43 analyzed using total constituent analysis?* (BDAT = destruction/removal technology)

Yes ___ No ___ NA ___

*See Appendix C for exceptions.
If yes, list the wastes for which total constituent analysis was used and provide the date of last test, identify the frequency of testing, and note any problems. Attach test results. (§268.7(a)(5))

_____

_____

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d. Is the paint filter liquids test (PFELT) used to determine if California List wastes are *liquid* hazardous wastes?

Yes ___ No ___ NA ___

*PFLT = Paint Filter Liquids Test (Test Method 9095, EPA Publication No. SW-846)

If yes, list the wastes for which PFLT was used and provide the date of last test, identify the frequency of testing, and note any problems. Attach test results. (§268.7 (a)(5))

_____

_____

3. Does the generator treat restricted wastes in 90-day tanks or containers regulated under §262.34 (permissible in some states)?

Yes ___ No ___ (If No, go to 4.)

Does the generator treat the wastes to meet appropriate treatment standards/prohibition levels?

Yes ___ No ___

If yes, has the generator prepared a waste analysis plan detailing the frequency of testing to be conducted? (§268.7(a)(4))

Yes ___ No ___ (If No, go to 4.)

Does the plan fulfill the following? (§268.7(a)(4)(i))

___ Based on a detailed chemical and physical analysis of a representative sample

___ Contains information necessary to treat the wastes in accordance with Part 268 requirements

Has the plan been filed with the Regional Administrator (return receipt, Federal Express slip, etc. required for verification)? (§268.7(a)(4)(ii))

Yes ___ No ___

Comments _____

_____

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4. Dilution Prohibition (§268.3):

a. Does the generator mix prohibited* wastes with different treatment standards?

*See Appendix C for distinction between restricted and prohibited wastes.

Yes ___ No ___ (If No, go to b.)

List the wastes_____

Are the wastes amenable to the same type of treatment? (55 FR 22666)

Yes ___ No ___

Comments _____

b. Does the generator dilute prohibited wastes to meet treatment standard criteria, or render them non-hazardous? (55 FR 22665-22666)

Yes ___ No ___ (If No, go to c.)

Check appropriate category:

___ Dilutes to meet treatment standards
___ Dilutes to render waste non-hazardous

Do the wastes fall into the following categories? (Check if appropriate.)

___ Characteristic wastes managed in treatment systems regulated under the Clean Water Act (§268.3(b)), (55 FR 22665)
___ Treatment standard specified in §§268.41 or 268.43

If the wastes do not fall into the above categories, briefly describe the conditions under which they were diluted.

_____

c. Based on an assessment of points a and b, and any other relevant circumstances, does the generator dilute prohibited wastes as a substitute for adequate treatment? (§268.3(a))

Yes ___ No ___

Comments _____

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5. F039 Multi-source leachate: Has the generator run an initial analysis for all constituents of concern in §§268.41 and 268.43? (55 FR 22620)

Yes ___ No ___ NA ___

C. Management

1. On-Site Management

a. Are restricted wastes treated or (other than in a RCRA exempt unit) stored for greater than 90 or 180 days, or disposed on site?

Yes ___ No ___

(If yes, the TSD Checklist must also be completed.)

Comments_____

b. If the generator treats characteristic wastes in systems regulated under the Clean Water Act, have the following been documented: the determination of restriction, how restricted wastes are managed, and why wastes discharged pursuant to an NPDES permit are not prohibited (if applicable)? (§268.7(a)(6)) (55 FR 22662)

Yes ___ No ___ NA ___

c. If the generator treats characteristic wastes in RCRA exempt units to render them non-hazardous, are the wastes managed as restricted prior to entering the exempt unit (§268.7(a)(6)) until the applicable treatment standards are met?* (§268.9(d))

Yes ___ No ___ NA ___

* This applies to both concentration based treatment standards specified in §§268.41 and 268.43, and to some §268.42 required methods which result in treatment below the characteristic level. See Appendix D.

d. If a waste is excluded from regulation or from the definition of solid or hazardous waste subsequent to the point of generation, does the generator comply with the requirements of §268.7(a)(6) (56 FR 3866-3867)? If the generator determines that he is managing a restricted waste that is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulation, under §§261.2-261.6 <u>subsequent to the point of generation</u>, is there a one-time notice in the facility's file stating such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from Subtitle C regulation, and the disposition of the waste?

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2. Off-Site Management: Waste Exceeds Treatment Standards

a. Does the generator ship any waste that exceeds treatment standards/ prohibition levels (not subject to a national capacity variance) to an off-site treatment or storage facility?

Yes ___ No ___ (If No, go to 3.)

Identify waste code(s) and off-site treatment or storage facilities to which wastes are shipped.

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Does the generator provide a notification to the treatment or storage facility? (§268.7(a)(1))

Yes ___ No ___ (If No, go to 3.)

If the generator specifies alternative treatment standards for lab packs, is the certification required in §268.7(a)(8) or (9) included with the notification?

Yes ___ No ___ NA ___

b. Is a notification sent with each waste shipment?

Yes ___ No ___

If no, is the waste subject to a tolling agreement pursuant to §62.20(e) (small quantity generator only)?

Yes ___ No ___ (If No, go to 3.)

List waste codes and subsequent handler with whom a contractual tolling agreement is held.

Waste Code	Subsequent Handler
_____	_____
_____	_____
_____	_____

Did the small quantity generator provide a notification to the receiving facility with the first waste shipment subject to the tolling agreement? (§268.7(a)(10))

Yes ___ No ___

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3. Off-Site Management: Waste Meets Treatment Standards

a. Does the generator ship waste that meets treatment standards/prohibition levels to an off-site disposal facility?

Yes ___ No ___ (If No, go to 4.)

Identify waste code(s) and off-site disposal facilities:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Does the generator provide a notification and a certification to the disposal facility? (§268.7(a)(2)(i) and (ii))?

Yes ___ No ___ (If No, go to d.)

b. Are a notification and a certification sent with each waste shipment?

Yes ___ No ___

If no, is the waste subject to a tolling agreement pursuant to §262.20(e) (small quantity generator only)?

Yes ___ No ___ (If No, go to c.)

List waste codes and subsequent handler with whom a contractual tolling agreement is held.

Waste Code	Subsequent Handler
_____	_____
_____	_____
_____	_____

Did the small quantity generator provide a notification and a certification to the receiving facility with the first waste shipment subject to the tolling agreement? (§268.7(a)(10))

Yes ___ No ___

c. Are characteristic wastes which have been rendered non-hazardous shipped to a Subtitle D facility?

Yes ___ No ___ NA ___ (If No or NA, go to 4.)

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Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are a notification and a certification for each shipment sent to the Regional Administrator or authorized State? (§§268.9(d)(1) and 268.7(b)(5))?

Yes ___ No ___

4. Off-Site Management: Wastes Subject to Variances, Extensions, or Petitions

a. Does the generator ship wastes to a treatment, storage, or disposal facility which are subject to a national capacity variance (Part 268, Subpart C), or case-by-case extension (§268.5)?

Yes ___ No ___ (If No, go to 5.)

Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Does the generator provide notification to the off-site receiving facility that the waste is not prohibited from land disposal? (§268.7(a)(3))

Yes ___ No ___

b. Is a notification sent with each waste shipment?

Yes ___ No ___

If no, is the waste subject to a tolling agreement pursuant to §262.20(e) (small quantity generator only)?

Yes ___ No ___ (If No, go to 5.)

List waste codes and subsequent handler with whom a contractual tolling agreement is held.

Waste Code	Subsequent Handler
_____	_____
_____	_____
_____	_____

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Did the small quantity generator provide a notification to the receiving facility with the first waste shipment subject to the tolling agreement? (§268.7(a)(10))

Yes ___ No ___

5. Records Retention

Does the generator retain on site copies of all notifications, certifications, and other relevant documents for a period of 5 years? (§268.7(a)(7))

Yes ___ No ___

Are copies of relevant tolling agreements, along with the LDR notification and/or certification, kept on site for at least 3 years after expiration or termination of the agreement? (§268.9)

Yes ___ No ___ NA ___

Do LDR documents reflect proper management of wastes previously covered under expired national capacity variances, case by case extensions and the soft hammer provision*?

Yes ___ No ___ NA ___

* See Appendix B. Note that the soft hammer provision expired as of 05/08/90. Soft hammer wastes which had treatment standards established in the Third Third rule were granted a minimum 90-day national capacity variance to 08/08/90.

Comments_____

D. Treatment Using RCRA 40 CFR Parts 264 and 265 Exempt Units or Processes

1. Are restricted wastes treated in RCRA exempt units (e.g., distillation units, wastewater treatment tanks, elementary neutralization, etc.)?

Yes ___ No ___ (If No, do not complete this section.)

List types of waste treatment units and processes:

Waste Code	Type of Treatment	Treatment Units and Processes

2. Are treatment residuals generated from these units?

Yes ___ No ___

Comments_____

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3. Are residuals further treated, stored for greater than 90/180 days, or disposed on site?

   Yes ___ No ___ NA ___

   (If yes, the TSD checklist must also be completed.)

E. Additional Comments, Concerns, or Issues Not Addressed in the Checklist:

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RCRA LAND DISPOSAL RESTRICTION INSPECTION

IV. TSD REQUIREMENTS

A. Waste Analysis (40 CFR 268.7(b), 264.13, and 265.13)

1. Does the waste analysis plan address the following LDR waste categories? (§§264/5.13(b)(6))

F001-F005 Spent Solvents	Yes ___	No ___	NA ___
F020-F023 and F026-F028 Dioxins	Yes ___	No ___	NA ___
California List Wastes	Yes ___	No ___	NA ___
First, Second, and Third Third Wastes	Yes ___	No ___	NA ___
Phase One Wastes	Yes ___	No ___	NA ___

Comments_____

_____

2. Has the waste analysis plan been revised to address F039 multi-source leachate?

Yes ___No ___ NA ___

3. What date was the waste analysis plan last revised? ___/___/___

4. Does analytical data contain all the information required to treat, store, or dispose of restricted wastes? (§§264/5.13(a)(1))

Yes ___No ___

If yes, which of the following are sources of analytical data? (More than one may apply.):

___ Generator provides data
___ Facility performs analyses in on-site laboratory
___ Facility contracts analyses at off-site laboratory

If the generator provides data, does the facility provide corroborative testing? (264/5.13(a)(2))

Yes ___No ___ NA ___

If analyses are conducted off site, identify lab:_____

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a. Are wastes with treatment standards specified in §268.41 analyzed using the toxicity characteristic leaching procedure (TCLP)?* (BDAT** = stabilization/immobilization technology) (§268.7(b)(1))

Yes ___ No ___ NA ___

*See Section 268.40(a) for options for using TCLP or EP test methods.
**BDAT = best demonstrated available technology. See Appendix A.

If yes, list the wastes for which TCLP was used and provide the date of last test, identify frequency of testing, and note any problems. Attach test results. (§§264/5.73 (b)(3))

_____

_____

b. Are wastes with treatment standards specified in §268.43 analyzed using total constituent analysis?* (BDAT = destruction/removal technology) (§268.7(b)(3))

Yes ___ No ___ NA ___

*See Appendix C for exceptions.

If yes, list the wastes for which total constituent analysis was used and provide the date of last test, frequency of testing, and note any problems. Attach test results. (§§264/5.73 (b)(3))

_____

_____

c. Is the paint filter liquids test (PFLT) used to determine if California List wastes are *liquid* hazardous waste? (§268.32(i))

Yes ___ No ___ NA ___

If yes, list the wastes for which PFLT was used and provide the date of last test, the frequency of testing, and note any problems. Attach test results. (§§264/5.73(b)(3))

_____

_____

B. Operating Record (40 CFR 264/5.73)

1. Does the operating record contain records and results of waste analyses performed as specified in §§268.4 and/or 268.7(b)? (§§264/5.73(b)(3))

Yes ___ No ___

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2. Does the operating record contain copies of LDR notifications and certifications?* (§§264/5.73(b)(11), (13), and (15))

   Yes ___ No ___

   * Include both those received from generators, and those prepared for off-site shipments.

3. Does the operating record include appropriate documentation for restricted wastes which are managed wholly on site? (§§264/5.73(b)(12), (14))

   Yes ___ No ___ NA ___

   Does the documentation discussed in points 2 and 3 reflect proper historical management of wastes previously covered under expired national capacity variances, case by case extensions, and the soft hammer provision?*

   Yes ___ No ___ NA ___

   * Note that the soft hammer provision expired as of 05/08/90. Soft hammer wastes which had treatment standards established in the Third Third rule were granted a minimum 90-day national capacity variance to 08/08/90.

C. Storage (40 CFR 268.50)

1. Are prohibited* wastes stored on site in containers?

   Yes ___ No ___ (If No, go to 2.)

   *See Appendix C for distinction between restricted and prohibited wastes.

   Are all containers clearly marked to identify the contents and date(s) entering storage? (§268.50(a)(2)(i))

   Yes ___ No ___

   Have wastes been stored for more than one year since the applicable LDR regulations went into effect?

   Yes ___ No ___ (If No, go to 2.)

   Can the facility show that such accumulation is necessary to facilitate property recovery, treatment, or disposal? (§268.50 (c))

   Yes ___ No ___

   If yes, state how:_____

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2. Are prohibited wastes stored on site in tanks?

   Yes ___ No ___ (If No, go to 3.)

   Are all tanks clearly marked with a description of the contents, the quantity of each hazardous waste received, and date each period of accumulation begins, or is such information recorded and maintained in the operating record? (§268.50(a)(2)(ii))

   Yes ___ No ___

   Have tanks been emptied at least once per year since the applicable LDR regulations went into effect?

   Yes ___ No ___ (If Yes, go to 3.)

   Can the facility show that such accumulation is necessary to facilitate proper recovery, treatment, or disposal? (§268.50(c))

   Yes ___ No ___

   If yes, state how:_____

3. Does the facility store liquid hazardous waste containing PCBs at concentrations greater than or equal to 50 ppm?

   Yes ___ No ___ (If No, go to D.)

   Does the facility meet the TSCA criteria in 40 CFR 761.65(b)? (§268.50(f))

   Yes ___ No ___

   Have these wastes been stored for more than one year? (§268.50(f))

   Yes ___ No ___

D. Treatment

1. Does the facility treat restricted wastes other than in surface impoundments?

   Yes ___ No ___ (If No, do not complete this section. Go to E.)

2. Are required technologies used to treat wastes which have treatment standards specified in §268.42? (§268.40(b))

   Yes ___ No ___ NA ___

   (If Yes or NA, go to 3.)

   Was an alternative method approved?

   Yes ___ No ___

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List each waste code, the technology specified in §268.42, and the alternative method. Check if approval of the alternative method is documented. (§268.42(b))

Waste Code	Required Technology	Alternative Method	Approval

3. Lab packs: If alternative treatment standards are specified, are incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 treated in compliance with the Subpart D treatment standards for these characteristic wastes? (§268.42(c)(4))

Yes ___ No ___ NA ___

4. Describe all other waste codes and treatment processes:

Waste Code	Treatment Processes

5. Characteristic wastes:

Is the Part 268 treatment standard lower than the Part 261 characteristic level?*

Yes ___ No ___

* This applies to both concentration based treatment standards specified in §§268.41 and 268.43, and to some §268.42 required methods which result in treatment below the characteristic level. See Appendix D.

If yes, does the facility manage the waste as restricted until Part 268 treatment standards are met, even after the waste is rendered non-hazardous? (§268.9(d))

Yes ___ No ___

Comments_____

_____

6. Dilution Prohibition (§268.3):

a. Does the facility mix prohibited wastes with different treatment standards?

Yes ___ No ___ (If No, go to c.)

List the wastes _____

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b. Are the wastes amenable to the same type of treatment? (55 FR 22666)

Yes ___ No ___

If yes, is this method used for the aggregated wastes?

Yes ___ No ___

Comments_____

c. Based on an assessment of points a and b, or any other relevant information, is dilution used as a substitute for treatment? (§268.3(a))

Yes ___ No ___

Comments_____

7. Does the facility, in accordance with an acceptable waste analysis plan, test residues from all treatment processes? (§268.7(b))

Yes ___ No ___

Comments_____

_____

8. Does the facility ship any characteristic wastes which have been rendered non-hazardous to a Subtitle D facility?

Yes ___ No ___ (If No, go to 8.)

Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are a notification and a certification for each shipment sent to the Regional Administrator or authorized State? (§§268.9(d)(1) and 268.7(b)(5))

Yes ___ No ___

9. Does the facility ship any wastes or treatment residues to an off-site land disposal facility?

Yes ___ No ___ (If No, go to 9.)

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Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are a notification and a certification provided to the land disposal facility with each waste shipment? (§§268.7(b)(4) and 268.7(b)(5))

Yes ___ No ___

10. Does the facility ship any wastes or treatment residues to be further managed at a different treatment or storage facility?

Yes ___ No ___ (If No, go to E.)

Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are appropriate generator notifications and certifications provided to the receiving facility with each waste shipment? (§268.7(b)(6))

Yes ___ No ___

E. Surface Impoundments (40 CFR 268.4)

1. Are restricted wastes placed in surface impoundments for treatment?

Yes ___ No ___ (If No, go to F.)

List_____

_____

2. Are evaporation or dilution the only recognizable treatment occurring in the surface impoundment? (§§268.3(a) and 268.4(b))

Yes ___ No ___

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Comments_____

_____

3. Has the facility submitted to the Agency a waste analysis plan and certification of compliance with minimum technology requirements and ground-water monitoring requirements? (§268.4(a)(4))

   Yes ___ No ___

4. If the minimum technology requirements have not been met, has a waiver been granted for that unit? (§268.4(a)(3)(ii))

   Yes ___ No ___ NA ___

5. Are representative samples of sludge and supernatant from the surface impoundment tested separately, acceptably, and in accordance with the sampling frequency and analyses specified in the waste analysis plan? (Attach test results.) (§268.4(a)(2)(i))

   Yes ___ No ___

6. Does the operating record adequately document the results of waste analyses performed in accordance with §268.4? (§§264/5.73(b)(3))

   Yes ___ No ___

   Comments_____

7. Do the treatment residues (sludges or liquids) exceed applicable treatment standards/prohibition levels?

   Sludge Yes ___ No ___ Waste Code _____
   Supernatant Yes ___ No ___ Waste Code _____

   Provide the frequency of analyses conducted on treatment residues:

   _____

8. If sludge residues exceed treatment standards/prohibition levels, are they removed on an annual basis? (§268.4(a)(2)(ii))

   Yes ___ No ___ NA ___

   Comments_____

   Are residues subsequently managed in another surface impoundment? (§268.4(a)(2)(iii))

   Yes ___ No ___

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9. If supernatant is determined to exceed treatment standards, is annual throughput greater than impoundment volume? (§268.4(a)(2)(ii))

Yes ___ No ___ NA ___

Comments_____

F. Land Disposal

1. Are restricted wastes placed in or on the land in units such as landfills, surface impoundments*, waste piles, land treatment units, salt domes/beds, mines/caves, concrete vaults, or bunkers? (§268.2(c))

Yes ___ No ___ (If No, go to G.)

*Note: Do not include surface impoundments addressed in E.

If yes, specify which units and what wastes each unit has received:

Unit	Waste
_____	_____
_____	_____
_____	_____

2. Does the facility, in accordance with an acceptable waste analysis plan, test prohibited wastes prior to land disposal to ensure that all applicable treatment standards and/or prohibition levels have been met? (§268.7(c)(2))

Yes ___ No ___

Comments_____

_____

3. Does the facility test wastes to ensure that they do not exhibit any characteristics at the point of disposal?* (§268.9(c))

Yes ___ No ___ NA ___

*Note: A waste may exceed a characteristic level only if the treatment standard for that characteristic has been met.

4. Does the operating record adequately document the results of waste analyses performed in accordance with §268.7(c)? (§§264/5.73(b)(3))

Yes ___ No ___

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If yes, at what frequency are analyses performed? _____
_____
_____
_____

5. Does the facility land dispose of restricted wastes which are not prohibited?

Yes ___ No ___ (If No, go to 5.)

List waste codes in appropriate category below:

National Capacity Variance (Part 268, Subpart C) _____
Case-By-Case Extension (§268.5) _____
No-Migration Petition (§268.6) _____
Treatment Standard Variance (§268.44) _____

Does the operating record contain records of the quantities, date of placement, and a copy of the generator notification (§268.7(a)(3)) for each shipment of restricted waste subject to a case-by case extension or no-migration petition? (§§264/5.73(b)(10))

Yes ___ No ___ NA ___

Do land disposal units receiving wastes covered by a national capacity variance or case-by-case extension meet the requirements in §268.5(h)(2)?

Yes ___ No ___ NA ___

If the facility has a case-by-case extension, is progress being made as described in reports to the Regional Administrator?

Yes ___ No ___ NA ___

6. Are restricted wastes placed in underground injection wells?

Yes ___ No ___ List _____

G. Other Waste streams

1. Does the facility generate wastes other than residues from RCRA treatment units?

Yes ___ No ___ (If No, go to H.)

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2. On-Site Management

a. If characteristic wastes are treated in systems regulated under the Clean Water Act, have the following been documented: the determination of restriction, how restricted wastes are managed, and why wastes discharged pursuant to an NPDES permit are not prohibited (if applicable)? (55 FR 22662)

Yes ___ No ___ NA ___

b. If characteristic wastes are treated in RCRA exempt units to render them non-hazardous, are the wastes managed as restricted until Part 268 treatment standards are met?* (§268.9(d))

Yes ___ No ___ NA ___

* This applies to both concentration based treatment standards specified in §§268.41 and 268.43, and to some §268.42 required methods which result in treatment below the characteristic level. See Appendix D.

3. Off-Site Management: Waste Exceeds Treatment Standards

Are wastes that exceed treatment standards/prohibition levels (not subject to a national capacity variance) shipped to an off-site treatment or storage facility?

Yes ___ No ___ (If No, go to 4.)

Identify wastes code(s) and off-site treatment or storage facilities to which wastes are shipped.

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are LDR notifications provided for each shipment to the treatment or storage facility? (§268.7(a)(1))

Yes ___ No ___ (If No, go to 4.)

If alternative treatment standards are specified for lab packs, is the certification required in §268.7(a)(8) or (9) included with the notification?

Yes ___ No ___ NA ___

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4. Off-Site Management: Wastes Meets Treatment Standards

a. Are wastes that meet treatment standards/prohibition levels shipped to an off-site disposal facility?

Yes ___ No ___ (If No, go to 5.)

Identify waste code(s) and off-site disposal facilities:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are LDR notifications and certifications provided for each shipment to the disposal facility? (§268.7(a)(2)(i) and (ii))?

Yes ___ No ___ (If No, go to b.)

b. Are characteristic wastes which have been rendered non-hazardous (in a RCRA exempt unit) shipped to a Subtitle D facility?

Yes ___ No ___ NA ___ (If No or NA, go to 5.)

Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

Are a notification and a certification for each shipment sent to the Regional Administrator or authorized State? (§§268.9(d)(1) and 268.7(b)(5))?

Yes ___ No ___

5. Off-Site Management: Wastes Subject to Variances, Extensions, or Petitions

a. Are wastes that are subject to a national capacity variance (Part 268, Subpart C) or a case-by-case extension (§268.5) shipped to a treatment, storage, or disposal facility?

Yes ___ No ___ (If No, go to 6.)

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Complete the following table:

Waste Code	Receiving Facility
_____	_____
_____	_____
_____	_____

b. Are LDR notifications (stating that the waste is not prohibited from land disposal) provided for each shipment to the off-site receiving facility? (§268.7(a)(3))

Yes ___ No ___

6. Dilution Prohibition (§268.3):

a. Are prohibited* wastes with different treatment standards mixed?

*See Appendix C for distinction between restricted and prohibited wastes.

Yes ___ No ___ (If No, go to b.)

List the wastes _____

Are the wastes amenable to the same type of treatment? (55 FR 22666)

Yes ___ No ___

Comments_____

b. Are prohibited wastes diluted to meet treatment standard criteria, or render them non-hazardous? (55 FR 22665-22666)

Yes ___ No ___ (If No, go to c.)

Check appropriate category:

___Dilutes to meet treatment standards
___Dilutes to render waste non-hazardous

Do wastes fall into the following categories? (Check if appropriate.) (§268.3(b))

___Managed in treatment systems regulated under the Clean Water Act
___Treatment standard specified in §§268.41 or 268.43

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If the wastes do not fall into the above categories, briefly describe the conditions under which they were diluted.

_____

_____

_____

c. Based on an assessment of points a and b, and any other relevant circumstances, are prohibited wastes diluted as a substitute for adequate treatment? (§268.3(a))

Yes ___ No ___

Comments_____

_____

H. Additional Comments, Concerns, or Issues Not Addressed in the Checklist:

_____

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V. TRANSPORTER REQUIREMENTS

A. Does the transporter accumulate restricted wastes at a transfer facility for more than 10 days? (40 CFR 268.50(a)(3))

Yes ___ No ___

If yes, check the appropriate regulatory status:

___ Interim status for storage
___ RCRA permit for storage

(The TSD checklist must also be completed.)

If no, describe inventory controls to ensure that wastes are not stored for more than 10 days:

_____

_____

_____

B. Does the transporter mix or combine restricted wastes of different DOT shipping descriptions? (40 CFR 263.10(c)(2))?

Yes ___ No ___

(If yes, the Generator checklist must also be completed.)

_____

_____

_____

C. Are restricted wastes treated in RCRA exempt units (e.g., distillation units, wastewater treatment tanks, elementary neutralization)?

Yes ___ No ___ (If No, do not complete this section.)

List types of waste treatment units and processes:

Waste Code	Type of Treatment	Treatment Units and Process

Are treatment residuals generated from these units?

Yes ___ No ___

Comments_____

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Are residuals further treated, stored at a transfer facility for greater than 10 days, or disposed on site?

Yes ___ No ___ NA ___

(If Yes, the TSD checklist must also be completed.)

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10. Landfills Checklist

Section A - Design Requirements (40 CFR 264/5.301)	Yes	No
1. Does landfill have two or more liners and a leachate collection system between the liners? (§264.301(c)), (§265.301(a))	___	___
2. Did owner/operator notify Regional Administrator 60 days prior to receiving waste? (§265.301(b))	___	___
3. If landfill does not have two liners and a leachate collection system, did owner/operator adequately demonstrate to the Regional Administrator that alternate design and operation prevents migration of hazardous constituents? (§264.301(d)), (§265.301(a))	___	___
4. If no double liner exists, does landfill fall into one of the following exemption categories: (§264.301(e)), (§265.301(d))	___	___
a. Monofill only holds wastes from foundry furnace emission controls or metal casting molding sand?	___	___
AND		
b. Monofill has at least one liner and there is no evidence that liner is leaking; the monofill is more than 14 miles from an underground source of drinking water; and has ground-water monitoring?	___	___
OR		
c. Owner/operator demonstrates that monofill is located, designed, and operated to prevent migration of hazardous constituents?	___	___
5. If landfill does not have two liners and a leachate collection system, does it have at least one liner for all existing portions? (§264.301(a)), (§265.301(c))	___	___
a. If yes, does this liner provide for the following:		
1. Prevent migration of wastes out of landfill to subsurface soil, ground water, and surface water? (Part 264)	___	___
2. A leachate collection and removal system immediately above the liner constructed to be chemically resistant to the waste and strong enough not to collapse under pressure? (Part 264)	___	___
6. If owner/operator does not comply with No. 5 above, is he exempt after demonstrating to the Regional Administrator that alternate design and operation prevents migration of hazardous constituents? (§264.301(d)), (§265.301(c))	___	___

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Section B - Operating Requirements (40 CFR 264.301(g), (h), (i), and (j)); (40 CFR 265.301(f), (g), (h), and (j))

		Yes	No
1.	Are run-on controls preventing flow onto the active portion of the landfill?	___	___
2.	Is runoff collected and controlled?	___	___
3.	Are collection and holding facilities emptied after storms?	___	___
4.	Is the landfill managed so that wind dispersal is controlled?	___	___

Section C - Monitoring and Inspection (40 CFR 264.303)

1.	Are liners inspected for defects during and after construction?	___	___
2.	Are landfills inspected weekly and after storms for defects?	___	___

Section D - Surveying and Recordkeeping (40 CFR 264/5.309)

1.	Does owner/operator retain records at the facility?	___	___
	a. If yes, are the following maintained:		
	1. On map, exact location and dimensions, including depths, of each cell?	___	___
	2. Contents of each cell and approximate location of each hazardous waste type within the cell?	___	___

Section E - Closure and Post-Closure (40 CFR 264/5.310)

1.	Is a closure plan kept on site?	___	___
	a. If yes, does cover provide for the following:		
	1. Minimizing migration of liquids?	___	___
	2. Minimum maintenance?	___	___
	3. Promote drainage; minimize erosion of cover?	___	___
	4. Accommodate settling and subsidence?	___	___
	5. Less permeable than bottom liner or natural subsoils?	___	___

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		Yes	No
b.	After final closure, does owner/operator provide for the following:		
1.	Maintain final cover?	___	___
2.	Continue to operate leachate collection and removal system until leachate is no longer collected?		
3.	Maintain ground-water monitoring?	___	___
4.	Prevent run-on and runoff from eroding and damaging cover?	___	___
5.	Protect and maintain surveyed bench marks?	___	___
		___	___

Section F - Ignitable and Reactive Waste (40 CFR 264/5.312)

1.	Are ignitable or reactive wastes placed in the landfill?	___	___
a.	If yes, do the waste and landfill meet all LDR requirements?	___	___
b.	If yes, is waste treated, rendered, or moved before or immediately after placement so that it is no longer ignitable or reactive?	___	___
2.	Are ignitable wastes in containers placed in landfill?	___	___
a.	If yes, attach a narrative describing how these wastes are handled to prevent ignition or reaction.		

Section G - Incompatible Wastes (40 CFR 264/5.313)

1.	Does owner/operator place incompatible wastes in landfill?	___	___
2.	If yes, is §264/5.17(b) complied with?	___	___

Section H - Bulk and Containerized Liquids (40 CFR 264/5.314)

1.	Does landfill receive any bulk or containerized liquid hazardous waste?	___	___
a.	If yes, have they been added to landfill since May 8, 1985?	___	___
2.	Does landfill receive containers of free liquids?	___	___
a.	If yes, is at least one of the following conditions met:		
1.	Have free-standing liquids been removed by decanting or other methods; or have they been mixed with absorbent or solidified?	___	___
2.	Are containers ampules?	___	___
3.	Is container designed to hold free liquids?	___	___
4.	Is container a lab pack?	___	___

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		Yes	No
3.	Have containers holding liquids that are not hazardous wastes been placed in the landfill since November 8, 1985? (§264.314(e)), (§265.314(f))	___	___
	a. If yes, is one of the following conditions met:		
	1. Was the only reasonable alternative to place it in a landfill or unlined surface impoundment?	___	___
	2. Did placement not present a risk to contaminating any underground source of drinking water?	___	___

Section I - Container Requirements (40 CFR 264/5.315)

1.	Are containers placed in the landfill?	___	___
	a. If yes, are they either:		
	1. 90 percent full?	___	___
	2. Crushed, shredded, or similarly reduced in volume?	___	___

Section J - Overpacked Drums (40 CFR 264/5.316)

1.	Are small containers of hazardous waste placed in landfill?	___	___
	a. If yes, are the following requirements met:		
	1. Waste packaged in non-leaking container and tightly sealed?	___	___
	b. Containers not overpacked according to DOT regulations?	___	___
	c. Absorbent material does not react with waste?	___	___
	d. Incompatible wastes not placed outside the same container?	___	___
	e. Reactive waste treated or rendered nonactive before packaging?	___	___
	f. Is such disposal in compliance with LDRs?	___	___

Section K - F020, F021, F022, F023, F026, and F027 Wastes (40 CFR 264/5.317)

1.	Are these wastes placed in landfill?	___	___
	a. If yes, did owner/operator receive permission from the Regional Administrator to do so?	___	___
	b. Is documentation of "a" above on file at the facility?	___	___

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11. Land Treatment Checklist

Section A - Treatment Program (40 CFR 264.271)	Yes	No
1. Does facility follow an approved land treatment program?	___	___

Section B - Treatment Demonstration (40 CFR 264.272)

1. Has owner/operator demonstrated to Regional Administrator that hazardous wastes used in the program are completely degraded, transformed, or immobilized in the treatment zone?	___	___

Section C - Operating Requirements (40 CFR 264.273), (40 CFR 265.272)

1. Is run-on diverted away from the land treatment facility?	___	___
2. Is runoff from the land treatment facility collected?	___	___
3. Are holding facilities emptied after storms?	___	___
4. Is the runoff analyzed to see if it is a hazardous waste?	___	___
5. Is the facility managed to control wind dispersal?	___	___
6. Is the unit inspected weekly (Part 264)?	___	___

Section D - Waste Analysis (40 CFR 265.273)

1. If the runoff is considered hazardous, how is it handled? (Use narrative explanation sheet.)	___	___
2. If it is not a hazardous waste, is it discharged through a point source to surface waters?	___	___

a. If yes, list NPDES Permit No. _____

3. What hazardous wastes are treated at the land treatment facility?

Subpart D Listed Wastes Characteristic Wastes (EP Toxicity)

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a. For these listed wastes, were analyses done to determine the concentrations of these constituents which caused the waste to be listed? Yes ___ No ___

1. If yes, what are these concentrations? (Use narrative explanation sheet.)

b. For those characteristic wastes (EP) toxicity, what are the concentrations of the following:

	Concentration, mg/liter	Waste
Arsenic		
Barium		
Cadmium		
Chromium		
Lead		
Mercury		
Selenium		
Silver		
Endrin		
Lindan		
Methoxychlor		
Toxphene		
2,4-D		
2,4,5-TP silvex		

Section E - Food Chain Crops (40 CFR 264/5.276)

1. Are food-chain crops grown? ___ ___

a. If yes, what are the concentrations of the following in the soil and vegetation:

	Soil concentration, mg/liter	Vegetation concentration, mg/liter
Arsenic		
Cadmium		
Lead		
Mercury		

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		Yes	No
2.	Did the facility notify Regional Administrator that it is growing food-chain crops? (§265.276(a))	___	___
3.	Has owner/operator demonstrated that no harm is done to health or environment? (§264.276(a))	___	___
4.	Has owner/operator demonstrated that any arsenic, lead, mercury, or other constituents under 265.273(b) will not be transported to crops? (§265.276(b))	___	___
5.	Does the facility treat waste that contains cadmium? (§264.276(b)), (§265.276(c))	___	___
	a. If yes, was the pH of the soil and waste mixture 6.5 or greater at the time of each waste application?	___	___
	1. If the pH was less than 6.5, did the waste contain cadmium concentrations of 2 mg/kg or less?	___	___

Section F - Unsaturated-Zone Monitoring (40 CFR 264/5.278)

1. Is an unsaturated-zone monitoring plan kept at the facility? (§265.278(a))

2. Does owner/operator perform the following:

a.	Soil monitoring?	___	___
b.	Soil-pore water monitoring?	___	___
c.	Sample depths below waste incorporation?	___	___
d.	Background values? (Part 264)	___	___
e.	Consistent sampling and analysis procedures?	___	___
f.	Determination of significant changes?	___	___
g.	Notification when change is found?	___	___

3. Does plan include the following: (§265.278(c))

a.	Depth of sampling?	___	___
b.	Number of samples?	___	___
c.	Frequency and timing of samples?	___	___

4.	Does owner/operator analyze for hazardous waste constituents?	___	___

Section G - Recordkeeping (40 CFR 264/5.279)

1. Are records kept at the facility of:

a.	Application dates?	___	___
b.	Application rates?	___	___
c.	Quantities?	___	___
d.	Waste location?	___	___

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Section H - Closure and Post-Closure (40 CFR 264/5.280)	Yes	No
1. Is a copy of the closure/post-closure plan kept at the facility?	___	___
2. Does closure plan address the following: (§265.280(a))		
a. Control of the migration of hazardous waste and hazardous waste constituents from the treated area into the ground water? (§265.280(a)(1))	___	___
b. Control of the release of contaminated runoff from the facility into surface water? (§265.280(a)(2))	___	___
c. Control of the release of airborne particulate contaminants caused by wind erosion? (§265.280(a)(3))	___	___
d. Compliance with §265.276 concerning the growth of food-chain crops? (§265.280(a)(4))	___	___
3. Does owner/operator ensure the following during closure: (§264.280(a))		
a. Continue all operations necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone? (§264.280(a)(1))	___	___
b. Minimization of run-off of hazardous constituents? (§264.280(a)(2))	___	___
c. Maintenance of run-on controls? (§264.280(a)(3))	___	___
d. Maintenance of runoff management system? (§264.280(a)(4))	___	___
e. Wind dispersal control? (§264.280(a)(5))	___	___
f. Continue to comply with any prohibitions or conditions concerning growth of food-chain crops? (§264.280(a)(6))	___	___
g. Continue unsaturated-zone monitoring in compliance with §264.278? (§264.280(a)(7))	___	___
h. Establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone? (§264.280(a)(8))	___	___

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		Yes	No
4.	During post-closure care, does owner/operator: (§264.280(c))		
a.	Continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone? (§264.280(c)(1))	___	___
b.	Maintain a vegetative cover over closed portions of the facility? (§264.280(c)(2))	___	___
c.	Maintain the run-on control system required under §264.273(c)? (§264.280(c)(3))	___	___
d.	Maintain the runoff management system required under §264.273(d)? (§264.280(c)(4))	___	___
e.	Control wind dispersal of hazardous waste if required under §264.273(f)? (§264.280(c)(5))	___	___
f.	Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under §264.276? (§264.280(c)(6))	___	___
g.	Continue unsaturated-zone monitoring in compliance with §264.278? (§264.280(c)(7))	___	___
5.	Does facility have certification that closure was performed according to plan? (§265.280(e))	___	___
a.	Was certification submitted to Regional Administrator? (Part 265)	___	___
6.	Does owner/operator continue the following during post-closure? (§265.280(f))		
a.	Soil-pore monitoring by collecting and analyzing samples as specified in the plan? (§265.280(f)(1))	___	___
b.	Restrict access? (§265.280(f)(2))	___	___
c.	Assure that growth of food-chain crops is in compliance? (§265.280(f)(3))	___	___
d.	Control wind dispersal? (§265.280(f)(4))	___	___

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Section I - Ignitable or Reactive Wastes (40 CFR 264/5.281)	Yes	No
1. Are ignitable or reactive waste placed in the facility?	___	___
a. If yes, are the wastes treated, rendered, or mixed before or after placement in the landfill so it is no longer reactive or ignitable?	___	___
b. Describe or attach a copy of treatment.		
Section J - Incompatible Wastes (40 CFR 264/5.282)		
1. Are incompatible wastes placed in the facility?	___	___
a. Are the incompatible wastes placed in different locations in the facility?	___	___

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12. Surface Impoundments Checklist

Section A - Design and Operating Requirements (40 CFR 264/5.221)	Yes	No
1. Does the facility operate one or more surface impoundments?	___	___
a. If yes, has owner/operator installed two or more liners and a leachate collection system for any new units, replacement of any existing units, or lateral expansion of units? (§264.221(c)), (§265.221(a))	___	___
b. Is owner/operator exempt from double-liner leachate collection system requirements because Regional Administrator has determined that impoundments design will prevent the migration of hazardous constituents? (§264.221(d)), (§265.221(a))	___	___
c. Did owner/operator notify Regional Administrator 60 days prior to receiving waste? (§265.221(b))	___	___
d. If impoundment does not have a double liner, is it exempt due to one of the following reasons? (§264.221(e)), (§264.221(d))	___	___
1. Monofill contains only wastes from a foundry furnace emission controls or metal casting molding sand	___	___
2. Monofill has at least one liner for which there is no evidence of leaking	___	___
3. Monofill is located, designed, and operated to ensure that no migration of constituents into ground or surface water occurs	___	___
e. Does owner/operator take measures to prevent overtopping resulting from overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error? (§264.221(g))	___	___
f. Is impoundment surrounded by dikes? (§264.221(h))	___	___
Section B - Operating Requirements (§265.221)		
1. Does owner/operator maintain at least 60 cm (2 ft) of freeboard (Part 265)?	___	___
a. If no, does owner/operator have certification by a qualified engineer?	___	___

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Section C - Containment System (40 CFR 265.223)	Yes	No
1. Do all earthen dikes have a protective cover (e.g., grass, gravel) to minimize erosion?	___	___
Section D - Waste Analysis and Trial Tests (40 CFR 265.225)		
1. Are wastes treated in the surface impoundment? (if yes, explain on a narrative sheet)	___	___
2. Has the owner/operator chemically treated a waste (or plans to) which is substantially different from previously treated wastes?	___	___
3. Has the owner/operator chemically treated a waste (or plans to) using a process that is substantially different from that previously used?	___	___
4. If yes to 2 or 3 above, have waste analyses and trial treatment tests been conducted?	___	___
a. If not, does owner/operator have written documentation on similar treatment of similar wastes?	___	___
Section E - Monitoring and Inspection (40 CFR 264/5.226)		
1. Does owner/operator check freeboard level daily? (Part 265)	___	___
2. Are the surface impoundment, dikes, and surrounding vegetation inspected weekly for deterioration or failures? (Part 265)	___	___
3. If regulated under Part 264, does owner/operator:		
a. Inspect liners for imperfections (tears and punctures for synthetic liners and cracks, root holes, etc., for soil-based liners) during construction and installations?	___	___
b. Inspect the operating impoundment weekly and after storms to detect evidence of deterioration, malfunction, and overtopping?	___	___
c. Have certification that the dike will withstand stresses from the amount and type of waste to be held and will not fail due to cleaning?	___	___

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Section F - Emergency Repairs, Contingency Plans (40 CFR 264.227)	Yes	No
1. Does facility have a contingency plan? (§264.227(c))	___	___
a. If yes, does plan stipulate that impoundment be removed from service under the following conditions: (§264.227(a))		
1. Sudden drop in liquid level?	___	___
2. Leaking dike?	___	___
b. Does plan detail the steps to be followed when removing impoundment from service, including: (§264.227(b))		
1. Shutting off flow into impoundment?	___	___
2. Containing any surface leakage?	___	___
3. Stopping the leak?	___	___
4. Taking measures to prevent catastrophic failure?	___	___
5. Notifying Regional Administrator of problems in writing if leaks cannot be contained?	___	___
c. If impoundment was removed from service, did owner/operator take the necessary precautions to rectify problems and to obtain certification before restoring impoundment to service? (§264.227(d))	___	___
d. If impoundment was removed from service and was not restored to service, was impoundment closed in accordance with an approved closure plan? (§264.227(e))	___	___

Section G - Closure and Post-Closure (40 CFR 264/5.228)		
1. Is a closure plan retained at the facility?	___	___
2. At closure, did owner/operator:		
a. Remove standing liquid? (§265.228(a))	___	___
b. Remove waste and waste residue? (§265.228(a)(1))	___	___
c. Remove liner? (§265.228(a)(1))	___	___
d. Remove underlying and surrounding contaminated soil? (§§264/5.228(a)(1))	___	___

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		Yes	No
	e. If not, did owner/operator demonstrate to Regional Administrator that the above materials were nonhazardous? (Part 265)	___	___
	1. If no, has owner/operator closed the impoundment and provided post-closure care? (§265.228(a)(2))	___	___
3.	If regulated under Part 264, has owner/operator:		
	a. Removed or decontaminated waste residues, contaminated system components, subsoils, structures, and equipment, and managed them as hazardous waste? (§264.228(a)(1))	___	___
	b. Eliminated free liquids by removing or solidifying remaining wastes or waste residues? (§264.228(a)(2)(i))	___	___
	c. Stabilized remaining wastes to a bearing capacity sufficient to support final cover? (§264.228(a)(2)(ii))	___	___
	d. Covered the impoundment with final cover? (§264.228(a)(2)(iii))	___	___
4.	Did owner/operator leave any residuals in place at closure? (§264.228(b))	___	___
5.	In post-closure, does owner/operator maintain integrity of cover, maintain and monitor the leak detection system and ground-water monitoring system, and prevent run-on and runoff? (§264.228(b)(1))	___	___

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Section H - Ignitable and Reactive Wastes (40 CFR 264/5.229)	Yes	No
1. Are ignitable or reactive wastes placed in the impoundment?	___	___
a. If yes, are they treated, rendered, or mixed before or immediately after placement in the impoundment so they no longer meet the definition of ignitable or reactive?	___	___
b. 1. If yes, is the waste managed so that it is protected from any conditions which may cause it to ignite or react and is the owner/operator maintaining and monitoring the leak detection system?	___	___
OR		
2. If yes, has the owner/operator obtained a certification that the design features or operating plans of the facility will prevent ignition or reaction?	___	___
OR		
c. Is the impoundment used solely for emergencies?	___	___

Section I - Incompatible Wastes (40 CFR 264/5.230)		
1. Are incompatible wastes placed in the impoundment?	___	___
a. If yes, has the owner/operator taken precautions to prevent accidental ignition or reaction?	___	___

For facilities regulated under Part 264:

Section J - Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, F027 (40 CFR 264.231)		
1. Does the impoundment contain hazardous waste numbers F020, F021, F022, F023, F026, F027?	___	___
a. If yes, does the owner/operator operate the impoundment in accordance with a management plan approved by the Regional Administrator or comparable state authority?	___	___

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13. Thermal Treatment Checklist

NOTE: Applies to thermal treatment of hazardous waste in devices other than incinerators.

Section A - Operating Requirements (40 CFR 265 Subpart P)	Yes	No
1. Is the process a noncontinuous (batch) process? (§265.373)	___	___
a. If no, is the process operating at steady-state conditions (including temperature) before adding hazardous waste?	___	___
b. Is a waste analysis documented in the operating record that includes: (§265.375)	___	___
1. Heating value?	___	___
2. Halogen content?	___	___
3. Sulfur content?	___	___
4. Concentration of lead?	___	___
5. Concentration of mercury?	___	___

NOTE: 4 and 5 not required <u>if</u> facility has written documented data that show the elements are not present.

2. Does the owner/operator monitor the following when thermally treating hazardous wastes: (§265.377)		
a. At least every 15 minutes, existing instruments which relate to the temperature and emission control: (§265.377(a)(1))		
1. Waste feed?	___	___
2. Auxiliary fuel feed?	___	___
3. Treatment process temperature?	___	___
4. Relevant process flow?	___	___
5. Relevant level controls?	___	___
b. Stack plume (emissions) at least hourly: (§265.377(a)(2))		
1. Color (normal)?	___	___
2. Opacity?	___	___
c. Thermal treatment process equipment at least daily: (§265.377(a)(3))		
1. Pumps, valves, conveyors, pipes, etc., for leaks, spills, and fugitive emissions?	___	___
2. Emergency shutdown controls?	___	___
3. System alarms?	___	___

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		Yes	No
d.	Construction materials of the treatment process or equipment at least weekly to detect corrosion or leaking of fixtures or seams?	___	___
e.	Construction materials of the area immediately surrounding discharge confinement structures at least weekly?	___	___

Section B - Closure (40 CFR 265.381)

1.	Is a closure plan maintained at the facility?	___	___

Section C - Open Burning (40 CFR 265.382)

1.	Is there evidence of any open burning of hazardous waste? (Use narrative explanation sheet)	___	___
2.	Is open burning or detonation of waste explosives conducted?	___	___
a.	If yes, is the detonation performed in accordance with the following table:		

Pounds of waste explosives or propellants	Minimum distance from open burning detonation to the property of others	
0-100	204 m	(670 ft)
101-1,000	380 m	(1250 ft)
1,001-10,000	530 m	(1730 ft)
10,001-30,000	690 m	(2260 ft)

Section D - Particular Hazardous Waste (40 CFR 265.383)

1.	Does owner/operator burn F020, F021, F022, F023, F026, and/or F027 wastes?	___	___
a.	If yes, does owner/operator have documented permission from Assistant Administrator for Solid Waste and Emergency Response to do so?	___	___

Section E - Ignitable or Reactive Waste

1.	Are ignitable or reactive wastes placed in the treatment process?	___	___
a.	If yes, is the waste treated, rendered, or mixed before or immediately after being placed in the treatment process so it no longer meets the definition of ignitable or reactive?	___	___

Describe or attach a copy of the treatment.

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Section F - Incompatible Wastes	Yes	No
1. Are incompatible wastes placed in the same treatment process or equipment?	___	___
2. Are hazardous wastes placed in washed equipment if equipment previously held incompatible waste?	___	___

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14. Transporters Checklist

Section A - EPA I.D. No. (40 CFR 263.11)	Yes	No
1. Does transporter have an EPA I.D. No.?	___	___
a. If yes, what is EPA I.D.?_____		
Section B - Transfer Facility Requirements (40 CFR 263.12)		
1. Does transporter store wastes at a transfer facility?	___	___
a. If yes, does transporter store wastes longer than 10 days?	___	___
Section C - Manifests (40 CFR 263.20)		
1. Does transporter use manifests?	___	___
a. If yes, are manifests signed and dated?	___	___
b. Does transporter return signed copies of manifests to generators? (§263.20(b))	___	___
c. Does transporter carry manifests with waste shipments? (§263.20(c))	___	___
d. Does transporter obtain delivery date and signature of next transporter or owner/operator of designated facility at delivery? (§263.20(d)(1))	___	___
e. Does transporter retain copies? (§263.20(d)(2))	___	___
f. Does transporter give remaining copies to accepting transporter or facility? (§263.20(d)(3))	___	___
g. Is transporter a water (bulk shipment) transporter? (§263.20(e))	___	___
1. If yes, is waste delivered to receiving facility by water? (§263.20(e)(1))	___	___
2. Does transporter carry a shipping paper with the waste containing all information required on the manifest (excluding EPA I.D. numbers, generator certification, and signatures)? (§263.20(e)(2))	___	___
3. Does transporter obtain delivery date and handwritten signature of owner/operator of designated facility on manifest or shipping paper? (§263.20(e)(3))	___	___
4. Does transporter retain copies of shipping papers or manifests, in accordance with §263.22? (§263.20(e)(5))	___	___
h. Is transporter a rail transporter? (§263.20(f))	___	___

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		Yes	No
1.	If yes, when accepting waste from a nonrail transporter, does rail transporter sign and date manifest acknowledging acceptance of waste? (§263.20(f)(1)(i))	___	___
2.	Does rail transporter return a signed copy of manifest to nonrail transporter? (§263.20(f)(1)(ii))	___	___
3.	Does rail transporter forward manifest copies to: (§263.20(f)(1)(iii))		
a.	The next nonrail transporter?	___	___
	OR		
b.	Designated receiving facility (if reached by rail)?	___	___
	OR		
c.	The last rail transporter designated to handle the waste in the U.S.?	___	___
4.	Does rail transporter retain a copy of manifest? (§263.20(f)(1)(iv), 263.22(c))	___	___
5.	Does rail transporter ensure that a shipping paper accompanies the hazardous waste and contains all information required on manifest (excluding EPA I.D., generator certification, and signatures)? (§263.20(f)(2))	___	___
6.	Does rail transporter obtain delivery date and handwritten signature of owner/operator of designated facility or the next nonrail transporter on manifest? (§263.20(f)(3), (4))	___	___
7.	Does rail transporter retain a copy of the manifest or signed shipping paper? (§263.20(f)(3), (4))	___	___
i.	Does transporter transport waste outside of the U.S.? (§263.20(g))	___	___
1.	If yes, does the transporter:		
a.	Indicate on manifest the date that shipment left the U.S.?	___	___
b.	Sign manifest and retain one copy?	___	___
c.	Return a signed copy of manifest to generator?	___	___

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Section D - Compliance With the Manifest (40 CFR 263.21)	Yes	No
1. Does transporter deliver entire shipment of hazardous waste to: (§263.21(a))		
a. Designated facility listed on manifest?	___	___
b. Alternate designated facility, if emergency prevents delivery to designated facility?	___	___
c. Next designated transporter?	___	___
d. Place outside U.S. designated by generator?	___	___
e. If no, does transporter contact generator for further directions, and then revise manifest accordingly? (§263.21(b))	___	___

Section E - Recordkeeping (40 CFR 263.22)

1. Does transporter keep a copy of manifest signed by generator, himself, and next designated transporter for 3 years from the date the hazardous waste was accepted by the initial transporter? (§263.22(a))	___	___
2. Does water (bulk shipment) transporter retain copy of shipping paper for each shipment delivered by water for 3 years from the date the hazardous waste was accepted by the initial transporter? (§263.22(b))	___	___
3. Does initial rail transporter keep a copy of manifest and/or shipping paper for 3 years from the date the hazardous waste was accepted by the initial transporter? (§263.22(c))	___	___
4. Does transporter shipping waste outside of the U.S. keep for 3 years copy indicating that waste was shipped from the date the hazardous waste was accepted by the initial transporter? (§263.22(d))	___	___

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15. Waste Information Checklist

	Yes	No
Waste name: _____		
Process generating the waste: _____		
How has facility classified the waste:		
Hazardous? (If so, list waste code) _____	___	___
Non-hazardous?	___	___
How has facility made this determination: (§262.11)		
Testing?	___	___
Process knowledge?	___	___
Are any test results available? (If yes, be sure to look at results)	___	___
Waste generation rate: _____		
Disposal procedure:		
Current: _____		
Past: _____		
Have manifests been used for off-site shipment? (If so, be sure to look at manifests) (§262.20)	___	___
Is waste subject to land disposal restrictions under 40 CFR 268?	___	___
Is waste subject to exclusions under 40 CFR 261.4?	___	___

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Checklist for Inspection of a New RCRA Incinerator

Section A - _____

Parameter	Type of Instrument	Location of Sensor	Specifications
1. Temperature			
a. Primary Chamber			
b. Secondary Chamber			
c. _____			
d. _____			
2. CO Emissions			
3. O_2 Emissions			
4. Flue Gas Flow Rate or Velocity or Equivalent Method: (_____)			
5. Feed Rate of Each Waste Stream to Each Combustion Chamber			
Chamber/Waste Stream			
a. _____			
b. _____			
c. _____			
d. _____			
e. _____			
6. Pressure in Primary Chamber			
7. Air Pollution Control			
a. _____			

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Parameter	Type of Instrument	Location of Sensor	Specifications
8. Inlet Gas Temperature to Air Pollution Control Device			
a.			
b.			
c.			
d.			
9. Additional Key Parameters			
a.			
b.			
c.			
d.			
e.			
f.			
g.			

Section B -Verification of Construction of the Incinerator and Support Equipment in Accordance with the Specifications in the Permit Application

1. Develop a list of specifications to be verified.

Section C -Shakedown Period Requirements (40 CFR 264.344(c)(1))

1. Verify no greater than 720 hr of testing with hazardous wastes

   OR

2. Verify that testing with hazardous wastes did not exceed the limits provided in the approved extension to the shakedown period.

3. Verify compliance with operating conditions during shakedown period.

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Section D -Compliance Schedule Requirements

Summary List of Compliance Schedule Items (use additional pages if necessary)	Adequate Response?

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16. Waste Piles Checklist

Section A - Design and Operating Requirements (40 CFR 264/5.250)	Yes	No
1. Is the pile containing hazardous waste protected from wind? (§264.251(j), (§265.251(j))	___	___
2. Does waste pile have a liner and leachate collection system? (§264.251(a))	___	___
a. If no, has facility proved to Regional Administrator that waste pile's design characteristics and location will prevent migration of hazardous constituents into ground water? (§264.251(b))	___	___
3. Is run-on diverted around active portion? (§264.251(g))	___	___
4. Is runoff collected and controlled? (§264.250(h))	___	___
5. Are collection and holding facilities emptied after storms? (§264.251(i))	___	___
Section B - Waste Analysis (40 CFR 265.252)		
1. Is a representative sample of waste from each incoming shipment analyzed before the waste is added to the pile to determine the compatibility of the wastes?	___	___
2. Does the analysis include a visual comparison of color or texture?	___	___
Section C - Containment (40 CFR 265.253)		
1. Is the leachate or runoff from the pile considered a hazardous waste?	___	___
a. If yes, is the pile managed with the following: (§265.253(a))		
1. An impermeable base compatible with the waste?	___	___
2. Run-on diversion?	___	___
3. Leachate and runoff collection?	___	___
4. Are collection and holding facilities periodically emptied?	___	___
OR		
5. Is the pile protected from precipitation and run-on by some other means? (§265.253(b))	___	___

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Section D - Monitoring and Inspection (40 CFR 264.254)	Yes	No
1. Are liners and covers inspected for damage during construction? (§264.254(a))	___	___
2. Are waste piles inspected weekly and after storms for deterioration, run-on and runoff controls, wind dispersal control, and proper function of leachate collection system? (§264.254(b))	___	___

Section E - Ignitable or Reactive Wastes (40 CFR 264/5.256)

1. Are ignitable or reactive wastes placed in the pile? (§§264/5.256(a)) ___ ___

   a. If yes, is the waste treated, rendered, or mixed so that the addition of the resulting waste results in the waste or mixture no longer meeting the definition and complies with §264.17(b)? (Use narrative explanation sheet to describe procedure.) ___ ___

   OR

   b. Is the waste protected from sources of ignition or reaction? (§264.256(b)), (§265.256(a)(2)) ___ ___

      1. If yes, use narrative explanation sheet to describe separation and confinement procedures.
      2. If no, use narrative explanation sheet to describe sources of ignition or reaction.

Section F - Incompatible Wastes (40 CFR 264/5.257)

1. Are incompatible wastes placed together in the pile?	___	___
2. Are incompatible wastes separated from each other by a dike, berm, or wall? (§§264/5.257(b))	___	___
3. Is there evidence of fire, explosion, gaseous emissions, leaching, or other discharge? (Use narrative explanation sheet.)	___	___

Section G - Closure and Post-Closure (40 CFR 264/5.258)

1. Is a closure plan retained at the facility?	___	___
2. At closure, were all waste residues, contaminated system components, contaminated subsoils, and structures and equipment contaminated with waste or leachate, removed or decontaminated? (§§264/5.258(a))	___	___
3. Were all contaminated subsoils removed from the site? (§§264/5.258(a))	___	___

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		Yes	No
	a. If no, did owner/operator close the facility and perform closure and post-closure care in accordance with §264.310 and 265.310?	___	___
4.	Is a plan for complying with No. 2 above included in closure plan? (§264.258(b))	___	___
5.	Is a contingency plan for complying with No. 3a above included in the plan? (§264.258(c)(1)(i))	___	___
6.	Is a contingency post-closure plan included? (§264.258(c)(1)(ii))	___	___
7.	Are cost estimates for the contingent closure and post-closure plan included in closure plan? (§264.258(c)(2))	___	___

Section H - Requirements for Waste F020, F021, F022, F023, F026, and F027 (40 CFR 264.259)

1.	Does facility place these F wastes in a waste pile?	___	___
	a. If yes, does facility have an approved management plan for these wastes?	___	___

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17. RCRA Waste Minimization Checklist

A.	**Statutory/Regulatory Requirements**	Yes	No
1.	Has the manifest been certified by an authorized representative? (§262.20(a))	___	___
2.	Has the waste minimization statement on the manifest been altered or deleted? (§262.20(a))	___	___
3.	Does the facility have a written description of their waste minimization program? (§262.20(a)), (§§264/5.75)	___	___
	If a written description is not provided, can the facility personnel provide a verbal description of the waste minimization program?	___	___
	Description of program: _____ _____ _____ _____		
4.	Is there any visual evidence of the facility's waste minimization efforts?	___	___
	If yes, describe the activities/program observed. _____ _____ _____ _____		
5.	Does the description in the biennial report and/or annual export reports include:		
a)	A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated? (§262.41(a)(6)); (§262.56(a)(5)(i)); (§§264/265.75(h))	___	___
b)	A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years? (§262.41(a)(7)); (§262.56(a)(5)(ii)); (§§264/265.75(i))	___	___
c)	Certification by the generator or authorized representative? (§262.56(a)(6) requires certification by primary exporter, §§264/5.75(j) requires certification by the owner/operator or authorized representative.) (§262.41(a)(8)); (§262.56(a)(6)); (§§264/265.75(j))	___	___

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		Yes	No
6.	For permitted facilities, does the operating record contain a certification by permittee (at least annually) that the permittee has a program in place to reduce the volume and toxicity of the hazardous wastes? (§264.73.(b)(9))	___	___

B. Permit/Enforcement Requirements

7.	Does the facility's permit contain any waste minimization requirements?	___	___

If yes, briefly describe the requirements and indicate if they have been met

_____

_____

_____

C. Permit/Regulatory Requirements

8.	Are there waste minimization requirements contained in enforcement orders or settlement agreements with the facility?	___	___

If yes, briefly describe the requirements and indicate if they have been met

_____

_____

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(Checklist No. 1 - Cont'd)

8. Liquid injection burner settings:

	Chamber	Burner No.	Permitted Maximum Burner Feed Rate/ Turndown Ratio	Observed Burner Flow Rate	Nominal Burner Flow Rate	Calculated Burner Turndown	Permitted Minimum Atomization Fluid Pressure	Observed Atomization Fluid Pressure
a.								
b.								

9. Containerized waste feed system limitations:

	Chamber	Feed Rate	Permitted Container Type and Size	Observed Container Type and Size
a.		NONE		
b.				
c.				
d.				

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(Checklist No. 1 - Cont'd)

B. Characteristics of wastes and fuels fed during the observation period:

1. Organics and physical characterization

	Organic constituents (limitations, compounds, etc)	Ash ( )	Chlorine ( )	Viscosity ( )	Heating Value (Btu/lb)	Specific Gravity ( )	Other ( )
(a) Combined waste stream limitations in permit							

(b) Limitations to permit for individual waste streams:

	Chamber	Waste Stream						
(1)								

	Organic constituents (limitations, compounds, etc)	Ash ( )	Chlorine ( )	Viscosity ( )	Heating Value (Btu/lb)	Specific Gravity ( )	Other ( )
(c) Analysis characteristics of combined waste stream							

(d) Characterization of waste streams fed during inspection: (Range of Dates of Analysis _____)

Chamber	Waste Stream

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(1) _____ _____ _____ _____ _____ _____ _____ _____ _____

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(Checklist No. 1 - Cont'd)

2. Metals

		Metals (ppm)										
			"Carcinogenic"				"Noncarcinogenic"					
		Ni	As	Cd	Cr	Be	Sb	Ba	Pb	Hq	Aq	Tl
(a)	Combined waste stream limitations in permit											
(b)	Limitations in permit for individual waste streams:											
	Chamber / Waste Stream											
(1)												
(a)	Analysis characteristics of combined waste streams											
(b)	Characterization of waste streams fed during inspection:											
	Chamber / Waste Stream											
(1)												

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(Checklist No. 1 - Cont'd)

3. Auxiliary fuel and total heat input:

a.

Auxiliary Fuel Type of Fuel	Chamber	Observed Flow Rate (units)	Heating Value (units)	Heat Input From Fuel (units)

b.

Total Heat Input	(units)
Permitted total heat input	
Observed fuel heat input	
Observed waste heat input	
Observed total heat input	

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(Checklist No. 2 - Cont'd)
II. In-Depth Audits and Documentation Review

A. Audits of Equipment Function

1. Continuous Emission Monitors

Observe a calibration check by facility staff of each CEM required in the permit.

Parameter	Instrument Manufacturer	Instrument Model No.	Extractive or in situ	Frequency of Calibration	Manual or Automatic Calibration	Calibration reference material
CO						
O_2						
THC						
NO_x						

Calibration

Parameter	Date/Time of Observation	Instrument Reading "Zero"	Instrument Reading Std. No. 1	Instrument Reading Std. No. 2	Instrument Reading Std. No. 3	Correction	Certified Concentration of Reference Materials Std. No. 1	Certified Concentration of Reference Materials Std. No. 2	Certified Concentration of Reference Materials Std. No. 3
CO									
O_2									
THC									
NO_x									

c. Modifications - Major instrument or sampling location been changed since the permit was issued/modified?

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Appendix V

Additional Resources

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Introduction

The following is a list of guidance manuals and other documents that may be used as resources by RCRA inspectors to assist them in the performance of their work. The documents are divided into eight categories, based on their subject matter. The categories are:

- General inspection documents
- TSD facility documents
- Corrective action documents
- Groundwater monitoring documents
- Land disposal restrictions documents
- Permit documents
- Underground storage tank documents
- References on industrial processes.

Within each category, the documents are referenced alphabetically. The date references next to documents indicate their effective dates; only years have been provided for some documents. Those with OSWER directive numbers (i.e., 9950.3) and the 530 numbers are available through the RCRA docket at EPA Headquarters; the PB series are available through the National Technical Information Services (NTIS). RCRA inspectors should check with their regional library before consulting the RCRA docket or NTIS for these and other reference materials.

I. General Inspection Documents

Document Title	Date	Order No.
Enforcement Liability Requirements for Operating RCRA Treatment, Storage and Disposal Facilities	October 29, 1988	9901.0
RCRA Facility Investigation Guidance Interim Final; Vol. I: Development of an RFI Work Plan and General Considerations for RCRA Facility Investigations; Vol. II: Soil, Groundwater, and Subsurface Gas Releases; Vol. III: Air and Surface Water Releases; Vol. IV: Case Study Examples	May 15, 1989	9502.00-6D PB89-200-299
RCRA Laboratory Audit Inspection Guidance Document	1988	9950.4
RCRA Technical Case Development Guidance Document	1988	9938.3

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II. Treatment, Storage, and Disposal Facility Documents

Document Title	Date	Order No.
Conducting RCRA Inspections at Mixed Waste Facilities	1991	9938.9
Enforcement Manual for Conducting RCRA Facility Assessments at POTWs	October 1987	
Enforcement of Financial Responsibility Requirements for RCRA Treatment, Storage, and Disposal Facilities That Are Closing	April 20, 1987	9901.2
Hazardous Waste Incinerator Inspection Manual	1989	9938.6
Hazardous Waste Tank Systems Inspection Manual	September 1988	9938.4
Land Disposal Restriction: Summary of Requirements	February 1991	9934.0-1A
Methods Manual for Compliance with the Boilers and Industrial Furnace Regulations—Burning Hazardous Waste in Boilers and Industrial Furnaces	December 15, 1990	PB91-120-006 530-SW-91-010
Model RCRA Permit for Hazardous Waste Management Facilities	September 15, 1988	PB90-210-998 530-SW-90-049
Part 265—Land Treatment Closure Post-Closure Guidance	April 14, 1987	9476.00-14
RCRA Regulations—Affecting Generators and Transporters (40 CFR 262 and 263); Explanations of Revisions in Reporting Burden Estimates	March 1991	PB87-15576/AS
Rules for Hazardous Waste Tank Systems	January 15, 1988	530-SW-88-004
Technical Guidance Document: Final Covers on Hazardous Waste Landfills and Surface Impoundments	July 15, 1989	PB89-233-489
Use of Corrective Action Authorities at Closing Facilities	March 8, 1988	9502.00-7

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III. Corrective Action Documents

Document Title	Date	Order No.
RCRA Corrective Action Interim Measures Guidance—Interim Final	June 16, 1988	530-SW-88-029
RCRA Corrective Action Plan; Interim Final	June 16, 1988	530-SW-88-028
RCRA Facility Assessment Guidance	October 9, 1986	PB87-107-769 530-SW-86-053

IV. Groundwater Monitoring Documents

Document Title	Date	Order No.
Groundwater Monitoring at Clean Closing Surface Impoundments and Waste Pile Units	March 31, 1988	9476.00-14
Operation and Maintenance Inspection Guide (RCRA Groundwater Monitoring Systems)	1988	9950.3
RCRA Comprehensive Groundwater Monitoring Evaluation Document	1988	9950.2
RCRA Groundwater Monitoring Technical Enforcement Guidance Document	September 1986	9950.1 055-000-00260-6

V. Land Disposal Restrictions Documents

Document Title	Date	Order No.
Land Disposal Restrictions Inspection Manual	1988	9938.1A

VI. Permit Documents

Document Title	Date	Order No.
Modifying RCRA Permits	September 15, 1989	530-SW-89-050
Permitting Hazardous Waste Incinerators	April 15, 1988	530-SW-88-024
Permit Writers' Guidance Manual for Hazardous Waste Land Treatment, Storage, and Disposal Facilities—Phase I: Criteria for Location Acceptability and Existing Applicable Regulations	February 15, 1985	PB86-125-580/AS 530-SW-85-024

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Permit Writers' Guidance Manual for Hazardous Waste Tank Standards	July 15, 1986	PB89-126-478 530-SW-89-003

VII. Underground Storage Tank Documents

Document Title	Date	Order No.
Detecting Leaks—Successful Methods Step-by-Step	November 1989	530-/UST-89-012
Guidance for Federal Field Citation Enforcement	March 20, 1991	9601.13
U.S. EPA Penalty Guidance for Violations of UST Regulations	November 14, 1990	9610.12
UST/LUST Enforcement Procedures Manual	August 7, 1990	9610.11

VIII. References on Industrial Processes

Air Pollution Engineering Manual, EPA, Pub. No. AP 40.

Background Documents for Waste Listing, EPA, Office of Solid Waste. Background documents have been prepared by EPA for all hazardous waste codes, providing information on the material listed, its generation, and the basis for the waste code listing.

Chemical and Process Technology Encyclopedia, Douglas M. Considine, ed. New York: McGraw-Hill Book Co., 1974.

Effluent Guidelines Development Documents, EPA, Office of Water Regulations and Standards, Effluent Guidelines Division. Effluent guidelines documents have been prepared for numerous industries regulated through categorical discharge standards promulgated under authority of the Clean Water Act.

Encyclopedia of Chemical Technology, Herman Mark, Donald Othmer, Charles Overberger, and Glenn Seaborg, eds. New York: John Wiley Sons, 1982.

Industrial Pollution Control: Issues and Techniques, Nancy Sell, Ph.D., New York: Van Nostrand Reinhold Co., 1981.

Industrial Water Pollution Control, W.W. Eckenfelder, Jr., New York: McGraw-Hill Book Co., 1966.

Industrial Water Pollution: Origins, Characteristics, and Treatment, N.L. Nemerow, Reading, Mass: Addison-Wesley, 1978.

Liquid Wastes of Industry: Theories, Practices and Treatment, N.L. Nemerow, Reading, Mass: Addison-Wesley, 1971.

Stationary Point and Area Sources, EPA, Pub. No. AP 42.

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Theories and Practices of Industrial Waste Treatment, N.L. Nemerow, Reading, Mass: Addison-Wesley, 1963.

Understanding the Small Quantity Generator Hazardous Waste Rules—A Handbook for Small Business, EPA, Office of Solid Waste, Pub. No. 530/SW-86-019 (Updated version to be issued in 1992).

Various publications of the Air Pollution Control Association on industrial sources of air pollution.

IX. EPA Guidance and Background Documents for Subtitle C

Regional Guidance Manual for Selected Interim Status Requirements (Draft), Pub. No. PB81-184 988, May 1, 1980.

Section on Plans Recordkeeping, including sample waste analysis plan, contingency plan, ground-water assessment plans, and operating record.

Final Draft Guidance for Subpart C of the Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, Pub. No. PB87-193 397, November 15, 1981.

Method for Determining the Compatibility of Hazardous Waste, Pub. No. EPA 600-2/80/076, 1980.

RCRA Ground-Water Monitoring Technical Enforcement Guidance Document, OSWER Directive No. 9950.1, 1985.

Background Documents. Sixteen background documents developed by the Agency to explain and respond to comments on the Phase I rules, each corresponding to a Section of the Subpart. List of background documents is as follows:

a. Purpose, Scope, and Applicability (including general issues concerning Interim Status Standards), Pub. No. PB81-181 414, April 15, 1980.
b. General Waste Analysis Requirements, Pub. No. PB81-181 406, April 29, 1980.
c. Security, Pub. No. PB81-181 398, April 15, 1980.
d. General Inspection Requirements, Pub. No. PB81-190 001, April 15, 1980.
e. Personnel Training, Pub. No. PB81-181 380, April 15, 1980.
f. Preparedness and Prevention, Contingency Plans, and Emergency Procedures, Pub. No. PB81-181 372, April 15, 1980.
g. Manifest System, Recordkeeping, and Reporting, Pub. No. PB81-190 043, April 15, 1980.
h. Interim Status Standards for Ground-Water Monitoring, Pub. No. PB81-189 79, May 20, 1980.
i. Interim Status Standards for Closure and Post-Closure, Pub. No. PB181-189 763, December 15, 1980.
j. Interim Status Standards Financial Requirements, Pub. No. PB81-1899 326, January 15, 1981.
k. Interim Status Standards for Tanks, Pub. No. PB81-190 050, December 15, 1980.
l. Interim Status Standards for Surface Impoundments, Pub. No. PB81-185 001, April 15, 1980.
m. Interim Status Standards for Land Treatment, Pub. No. PB81-190 068, April 15, 1980.
n. Interim Status Standards for Landfills, Pub. No. PB81-189 789, February 15, 1981.
o. Interim Status Standards for Incinerators, Pub. No. PB81-190 092, December 15, 1981.
p. Interim Status Standards for Thermal Treatment, Pub. No. PB81-189 771, April 15, 1980.

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The inspector can obtain these documents from EPA Regional Office libraries, at EPA Headquarters library, or from Solid Waste Information, U.S. EPA, 26 West St. Clair Street, Cincinnati, Ohio 45268.

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Appendix VI

Significant Recent RCRA Federal Register Entries

In the following table, we have cited and described entries in the Federal Register that have appeared since January 1, 1990 and that have relevance to RCRA inspectors. Short summaries have been provided for each rule, along with the respective effective dates. The entries appear in order of CFR Part, beginning with 40 CFR 258 and, within each CFR Part, are in reverse chronological order of Federal Register publication date.

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 258	Solid Waste Disposal Facility Criteria	10/09/93 (Except Subpart G 04/09/94)	10/09/91 56 FR 50978	This final rule established requirements for municipal solid waste landfills under 40 CFR Parts 257 and 258. Specifically, it covers location restrictions, facility design operations, groundwater monitoring, corrective action measures and conditions for closing including financial responsibility. The rule conditionally exempts certain small landfills from the design, groundwater monitoring, and corrective action requirements.
40 CFR 261	Identification and Listing of Hazardous Waste; Wood Preserving Wastes		04/27/93 58 FR 25706	In this rule, EPA proposed to list as hazardous waste code F033 the process residuals and wastewaters from wood preserving operations which use pentachlorophenate.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Identification and Listing of Hazardous Waste; Wood Preserving Wastes	12/24/92 and 06/24/93	12/24/92 57 FR 61492	This final rule amends the F032, F034, and F035 hazardous waste listings. In addition, the rule modified the drip pad standards for wood preserving facilities.
40 CFR 261	Suspension of Toxicity Characteristic Rule for Non-UST Petroleum Product Contaminated Media and Debris		12/24/92 57 FR 61542	In this rule EPA proposed a suspension of the Toxicity Characteristic rule waste codes D018-D043 for three years for media and debris contaminated by petroleum products from sources other than RCRA Subtitle I underground storage tanks.
40 CFR 261	Identification and Listing of Hazardous Waste; Toxicity Characteristic Revision	11/24/92	11/24/92 57 FR 55114	In this final rule, EPA amended the hazardous waste regulations for testing conducted to evaluate a solid waste for the Toxicity Characteristic. Specifically, this rule removes the Quality Assurance (QA) requirement found in method 1311, the Toxicity Characteristic Leaching Procedure (TCLP), for correcting measured values for analytical bias.
40 CFR 261	Definition of Hazardous Waste; "Mixture" and Derived-From" Rules	10/30/92	10/30/92 57 FR 49278	This final rule removes the "sunset" provision from the reinstatement of mixture and derived-from rules in the 3/3/92 Federal Register.
40 CFR 261	Definition of Hazardous Waste; "Mixture" and Derived-From" Rules; Withdrawal of Proposed Rule		10/30/92 57 FR 49280	This rule withdraws the proposed regulation, HWIR, which would have amended the hazardous waste identification listing regulations. EPA withdrew the CBEC and ECHO approaches in response to a broad range of comments received on HWIR.
40 CFR 261	Identification and Listing of Hazardous Waste; Chlorinated Toluenes Production Wastes	04/15/93	10/15/92 57 FR 47376	EPA amended its RCRA regulations by adding three wastes generated during the production of chlorinated toluenes to the list of hazardous waste from specific sources. The new wastes are listed as K149-151.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Identification and Listing of Hazardous Waste; Coke-by-Products Wastes	02/18/93	08/18/92 57 FR 37284	This final rule promulgated seven waste codes as additions to the List of "K wastes" found in 261.31; K141-145, K147, and K148. These new wastes are generated during the production, recovery, and refining of coke-by-products produced from coal.
40 CFR 261	Identification and Listing of Hazardous Waste; Exclusions	06/22/92	06/22/92 57 FR 27880	This final rule amends the exclusion from the definition of solid waste for coke-by-product residues that are recycled in certain manners. 40 CFR 261.4(a)9 now excludes not only K087, but any wastes from the coke-by-products processes that are hazardous only because they exhibit the Toxicity Characteristic. When subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar, or are mixed with coal tar prior to the tar's sale or refining.
40 CFR 261	Identification and Listing of Hazardous Waste; Used Oil	06/19/92	05/20/92 57 FR 21524	This final rule determined that used oil destined for disposal will not be considered a listed hazardous waste. This rule also promulgated an exclusion from the definition of hazardous waste in 40 CFR 261.4(b)(15) for certain types of used oil filters.
40 CFR 261	Identification and Listing of Hazardous Waste		05/20/92 57 FR 21450	This rule, known as HWIR, proposed two approaches for amending the hazardous waste identification listing regulations. The two approaches are known as CBEC and ECHO.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Hazardous Waste Management System; Definition of Hazardous Waste; "Mixture" and "Derived-From" Rules	02/18/92	03/03/92 57 FR 7628	This rule simultaneously removed and reissued 40 CFR 261.3, including the "mixture" and "derived-from" rules, on an interim basis under §553(b)(3)(B) of the Administrative Procedure Act (APA). The effective date of this rule was February 18, 1992, and the expiration date for paragraphs (a)(2)(iv) and (c)(2)(i) of 40 CFR §261.3 is April 28, 1993.
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste	01/13/92	01/02/92 57 FR 12	EPA finalized the July 19, 1991 (56 FR 33238) proposed rule to confirm 40 CFR §261.11(a)(3) to reflect the Agency's intent and interpretation of one of the criteria for listing wastes as hazardous.
40 CFR 261	Final Regulatory Determination for Special Wastes from Mineral Processing (Mining Waste Exclusion)	07/15/91	06/13/91 56 FR 27300	This final rule presented the Agency's final regulatory determination on mineral processing wastes. EPA concluded that regulation under Subtitle C of RCRA is inappropriate for all 20 of the special wastes that were studied and listed under §261.4(b)(7). EPA plans to address 18 of these wastes under Subtitle D of RCRA. The remaining two wastes, phosphogypsum and process wastewater from phosphoric acid production, are slated to be regulated under a program EPA plans to develop under the Toxic Substance Control Act.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Hazardous Waste Management System: Identification and Listing of Hazardous Waste; CERCLA Hazardous Substance Designation - Petroleum Refinery Primary and Secondary Oil/Water/Solids Separation Sludge Listings (F037 and F038)	05/02/91	05/13/91 56 FR 21955	This interim final rule revised the definition of waste subject to the F037 and F038 listings found at 40 CFR §261.31 to state that sludges from non-contact once-through cooling waters are not included. This rule further amended F038 listings to clarify that floats generated in aggressive biological treatment units are not included in the listing description of that waste stream.
40 CFR 261	Hazardous Waste Management Systems: Identification and Listing of Hazardous Waste	05/01/92	05/01/91 56 FR 19951	This final rule announced an administrative stay on a portion of the hazardous waste listing for K069 found at 40 CFR §261.32 so that the listing does not apply to slurries generated from air pollution control devices that are intended to capture acid gases and are not dedicated chiefly to control of particulate air emissions. The administrative stay remains in effect until 30 days after the completion of a rulemaking that permanently amends the language of the K069 listing to clarify the scope of the listing.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste Toxicity Characteristic; Hydrocarbon Recovery Operations	03/25/91	04/02/91 56 FR 13406	The final rule extended the compliance date for the toxicity characteristic regulations from March 25, 1991, to January 25, 1993, for produced groundwaters from free-phase hydrocarbon recovery operations at petroleum refineries, marketing terminals, bulk plants, petroleum pipelines and transportation sector spill sites. The purpose of this extension is to ensure that cleanup activities at these facilities are not disrupted or stopped due to noncompliance with the toxicity characteristic rule. The rule amended 40 CFR §261.4(b)(11).
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic	02/05/91	02/13/91 56 FR 5910	This interim final rule suspended the toxicity characteristic rule for used refrigerants that would exhibit the toxicity characteristic but would be reclaimed for reuse. The exemption is found at 40 CFR §261.4(b)(12).
40 CFR 261	Hazardous Waste Management Systems Identification and Listing of Hazardous Waste; Toxicity Characteristic; Hydrocarbon Recovery Operations	02/01/91	02/01/91 56 FR 3978	This interim final rule further extended the compliance date for the toxicity characteristic regulations from January 25, 1991, until March 25, 1991, for groundwater reinjected or reinfiltrated during existing hydrocarbon recovery operations at petroleum refineries, marketing terminals and bulk plants, in order to allow the Agency sufficient time to evaluate comments received on the issue. The exemption is codified at 40 CFR §261.4(b)(11).

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Wood Preserving; Identification and Listing of Hazardous Waste	06/06/91	12/06/90 55 FR 50450	This final rule amended the RCRA regulations by listing as hazardous three categories of wastes from wood preserving operations: F032, F034, F035. These wastes may, however, exhibit the Toxicity Characteristic and, consequently, may already be regulated under Subtitle C of RCRA.
40 CFR 261	Hazardous Waste Management Systems: Identification and Listing of Hazardous Waste	05/02/91	11/02/90 55 FR 46354	In this final rule, EPA promulgated two waste codes as additions to the list of "F wastes" found in 261.31. These new wastes are generated in the separation of oil/water/solids from petroleum refining process wastewaters and oily cooling wastewaters. EPA amended Appendix VII of 40 CFR 261 to add the organic and inorganic constituents for which these wastes are listed. RQ values under Section 302 of CERCLA were also established in this rule. The RQ for these wastes will be set at the statutory level of 1 lb.
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic; Hydrocarbon Recovery Operations	09/25/90	10/05/90 55 FR 40834	In this interim final rule, EPA extended the compliance of the TCLP rule to recovery of hydrocarbon from petrol refining facility, marketing terminals and bulk plants for 120 days from September 25, 1990.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Clarifications	09/25/90	09/27/90 55 FR 39409	EPA provided guidance and clarification to the regulated community on four issues related to the TCLP. These issues are: (1) the regulatory status of surface impoundments managing newly regulated TC wastes; (2) groundwater monitoring requirements for newly regulated land disposal facilities; (3) Section 3010 notification requirements; and (4) permit modification requirements.
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions	08/02/90	08/02/90 55 FR 31387	This final rule corrected the ruling on March 29, 1990 regarding the Toxicity Characteristic by extending the period within which affected small quantity generators must comply with the RCRA Section 3010 notification requirements.
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions	09/25/90	06/29/90 55 FR 26986	This final rule made corrections to the March 29, 1990 (55 FR 11798) rule to ensure consistency of the TCLP with other methods in SW-846.
40 CFR 261	Hazardous Waste Management Standards: Identification and Listing of Hazardous Waste	05/04/90	05/04/90 55 FR 18726	In these technical amendments, the Agency conformed the language of the regulations implementing RCRA Section 3001 to reflect the Agency's intent.
40 CFR 261	Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions	09/25/90	03/29/90 55 FR 11798	This final rule replaced the Extraction Procedure leach test with the Toxicity Characteristic Leaching Procedure and added 25 organic chemicals to the list of toxic constituents for the Toxicity Characteristic.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 261	Mining Waste Exclusion; Section 3010 Notification for Mineral Processing Facilities; Designated Facility Definition; Standards Applicable to Generators of Hazardous Waste	07/23/90	01/23/90 55 FR 2322	This final rule removed five of the 20 conditionally retained mineral processing wastes from the exemption from hazardous waste regulation provided by RCRA Section 3001(b)(3)(A)(ii), often referred to as the Bevill exclusion.
40 CFR 264/265	Corrective Action Management Units and Temporary Units	04/19/93	02/16/93 58 FR 8658	This final rule promulgated standards which, when followed, allow the use of corrective action management units for the purpose of managing remediation waste which will not be subject to LDRs or MTRs. Also, containers and tanks which manage remediation waste only and which follow the regulations are now allowed to store waste up to one year without a permit.
40 CFR 264/265	Timing of Surface Impoundment Retrofitting Under the Land Disposal Restrictions Rule		02/04/92 57 FR 4170	This proposed rule clarifies the deadline by which surface impoundments receiving wastes that are newly identified or listed as hazardous must be brought into compliance with the minimum technological requirements (MTR) established in RCRA §3004(o)(1)(A). The proposal would give all surface impoundments up to four years from the date of compliance to comply with the MTRs.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 264/265	Liners and Leak Detection Systems for Hazardous Waste Land Disposal Units	07/29/92	01/29/92 57 FR 34762	This final rule amended the current regulations concerning liner and leachate collection and removal systems for hazardous waste surface impoundments, landfills, and waste piles. EPA also added new regulations requiring owners/ operators of hazardous waste surface impoundments, waste piles, and landfills to install and operate leak detection systems when new units are added, laterally expanded, or replaced.
40 CFR 264/265	Standards Applicable to Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; Liability Requirements	07/01/91	07/01/91 56 FR 30200	This final rule corrected certain omission errors in the financial responsibility requirements under Subtitle C of RCRA.
40 CFR 264/265	Identification and Listing of Hazardous Waste; Wood Preserving	07/01/91	07/01/91 56 FR 30192	This technical correction corrected errors and clarified language in the December 6, 1990 Federal Register.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 264/265	Hazardous Waste Management System: Identification and Listing of Hazardous Waste; Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities; and Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities	06/05/91	06/13/91 56 FR 27332	This final rule announced an administrative stay of the hazardous waste listings F032, F034, and F035 for wastes in process areas at wood preserving plants. The primary effect of the stay was to conditionally extend the effective date of the drip pad management standards to February 6, 1992, for the upgrade of existing drip pads, and to May 6, 1992, for the installation of new drip pads. the stay was only available to facilities meeting certain conditions, and was intended to limit the extension to those facilities making a bona fide effort to comply with the rule.
40 CFR 264	Corrective Action for Solid Waste Management Units (SWMUs) at Hazardous Waste Management Facilities		07/27/90 55 FR 30798	This proposed rule would create a new Subpart S in 40 CFR 264 to define requirements for conducting remedial investigations, evaluating potential remedies, and selecting and implementing remedies at RCRA facilities. This Federal Register entry can be used as guidance until it is finalized.
40 CFR 264/265	Hazardous Waste Treatment, Storage, and Disposal Facilities - Organic Air Emission Standards for Process Vents and Equipment Leaks	12/21/90	06/21/90 55 FR 25454	This final rule promulgated standards that limit organic air emissions as a class at hazardous waste treatment, storage, and disposal facilities requiring a permit.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 264	Hazardous Waste Management System; Final Codification Rule	05/09/90	05/09/90 55 FR 19262	This correction notice applies to certain landfills and surface impoundments for which Part B of the permit application was received by November 8, 1984. Permits issued for units in this category are not required to include minimum technology requirements pursuant to Section 3004(o) of RCRA but may include such requirements where necessary to protect human health and the environment on a case-by-case basis pursuant to Section 3005(c) of RCRA.
40 CFR 266	Hazardous Waste Management System: Identification and Listing of Hazardous Waste; Burning of Hazardous Waste in Boilers and Industrial Furnaces	08/21/91	09/05/91 56 FR 43874	This final rule announced an administrative stay of the permitting standards for boilers and industrial furnaces adopted pursuant to RCRA as they apply to coke ovens burning certain hazardous wastes from the coke by-products process. Coke ovens that reprocess these wastes need not submit their applications for a permit under 40 CFR Part 266, Subpart H, while EPA evaluates comments on a proposal to exclude such wastes from RCRA Subtitle C regulation.
40 CFR 266	Burning of Hazardous Waste in Boilers and Industrial Furnaces	08/21/91	08/27/91 56 FR 42504	This final rule made technical amendments to the BIF regulations in 40 CFR Part 266, Subpart H. These revisions provide clarification and correct unintended consequences of the regulations.
40 CFR 266	Burning of Hazardous Waste in Boilers and Industrial Furnaces	08/21/91	07/17/91 56 FR 32688	In this final rule, EPA published technical corrections to the BIF regulations in 40 CFR Part 266, Subpart H (56 FR 7134; February 21, 1991). This rule also added Appendix IX and Appendix X to Part 266.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 266	Burning of Hazardous Waste in Boilers and Industrial Furnaces	08/21/91	02/21/91 56 FR 7134	This final rule expanded the regulations on the burning of hazardous waste in boilers and industrial furnaces to regulate air emissions from such units, codified at 40 CFR Part 266, Subpart H. This rule also subjects owners/operators of these devices to general facility standards applicable to hazardous waste treatment, storage, and disposal facilities, and subjects hazardous waste storage units at regulated burner facilities to Part 264 standards. This rule also took action on two petitions for rulemaking from Dow Chemical Company and the American Iron and Steel Institute and made several technical corrections to 40 CFR §270.73.
40 CFR 268	Land Disposal Restrictions for Newly Listed Wastes and Hazardous Debris	06/30/92; 11/09/92; and 02/18/93	08/18/92 57 FR 37194	This "phase one" final rule sets treatment standards under the land disposal restrictions for certain listed hazardous wastes. This rule established a new type of treatment or storage unit, the containment building. Also finalized in this rule are revised treatment standards for debris contaminated with listed hazardous waste or debris that exhibits a characteristic of hazardous waste. In addition the treatment standards for the F001-F005 spent solvents were revised.
40 CFR 268	Land Disposal Restrictions for Newly Listed Wastes and Contaminated Debris		01/09/92 57 FR 958	EPA proposes treatment standards for certain newly identified hazardous wastes, and also proposes to revise treatment standards for contaminated debris.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 268	Land Disposal Restrictions; Potential Treatment Standards for Newly Identified and Listed Wastes and Contaminated Soils		10/24/91 56 FR 55160	This advance notice of proposed rulemaking requests data and comments on possible BDATs for many wastes that have been identified and listed as hazardous since HSWA. This notice discusses potential BDATs and related capacity for wood preserving wastes (F032, F034 and F035), spent potliners from primary aluminum reduction (K088), characteristic waste generated by the mining and mineral processing industries that are no longer suspended by the Bevill Amendment, and wastes that have been recently identified as D004 through D043 based on TCLP. EPA is also soliciting data and comments on its approach to developing BDATs for contaminated soils.
40 CFR 268	Land Disposal Restrictions for Electric Arc Furnace Dust (K061)	08/08/91	08/19/91 56 FR 41164	This final rule promulgated, under 40 CFR Part 268, treatment standards under the land disposal restrictions program for K061 (electric arc furnace dust) nonwastewaters that contain 15 percent or more total zinc at the point of initial generation. The rule also finalized a generic exclusion from the derived - from rule (40 CFR §261.3(c)(2)(i)) for high temperature metals recovery (HTMR) nonwastewater slag residues from K061 processing, provided the residues meet certain conditions. This rule also granted a conditional exclusion for K061 HTMR splash condenser dross residue from classification as a solid waste.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 268	Land Disposal Restrictions for Third Third Scheduled Wastes	01/31/91	01/31/91 56 FR 3864	This final rule corrected errors and clarified the language in the preamble and regulations of the June 1, 1990 land disposal restrictions third third final rule (55 FR 22520). It modified 40 CFR Part 268.
40 CFR 268	Land Disposal Restrictions for Third Third Scheduled Wastes	05/08/90	06/01/90 55 FR 22520	This final rule promulgated treatment standards for third third wastes and five newly listed wastes, including the characteristics of ignitability, corrosivity, reactivity, and EP toxicity.
40 CFR 268	Hazardous Waste Management System: Land Disposal Restrictions; Response to Court Remand	02/26/90	02/26/90 55 FR 6640	In this response to court remand, a panel from the Court of Appeals for the District of Columbia Circuit Court required the Agency to clarify the selection of technology-based treatment standards in the November 7, 1986 Federal Register or withdraw the rule.
40 CFR 273	Hazardous Waste Recycling Program; Universal Waste		02/11/93 58 FR 8102	This rule proposed new regulations which set up management standards for such universal wastes as nickel cadmium batteries and pesticides. The proposed rule includes procedures for adding other wastes to the recycling scheme in the future such as antifreeze and thermostats.
40 CFR 279	Identification and Listing of Hazardous Waste; Recycled Used Oil Management Standards	03/08/93	09/10/92 57 FR 41566	This final rule determined that recycled used oil will not be considered a listed hazardous waste. This rule also establishes management for various handlers of recycled used oil.
40 CFR 280	Underground Storage Tanks Containing Petroleum; Financial Responsibility Requirements	03/22/93	02/18/93 58 FR 9026	This rule established four alternative mechanisms for use by local governments to demonstrate financial responsibility for damages caused by accidental underground storage tank releases.

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Significant Recent RCRA Federal Register Entries (Continued)

CFR Parts, Sections Affected	Title of Rule	Effective Date	Federal Register Publication Date	Summary of Rule
40 CFR 280	Underground Storage Tanks Containing Petroleum; Financial Responsibility Requirements	12/23/91	12/23/91 56 FR 66369	This final rule extended the date for compliance with financial responsibility requirements for Group 4 petroleum UST owners to December 31, 1993. The previous deadline under 40 CFR §280.91(d) was October 26, 1991.
40 CFR 280	Underground Storage Tanks; Technical Requirements	09/12/91	08/13/91 56 FR 38342	This final rule allowed overfill equipment to be used closer to the top of larger bulk storage tanks because the Agency acknowledged that sufficient volumes to receive excess product would still be available there. It amended 40 CFR §280.20(c)(1)(ii).
40 CFR 280	Underground Storage Tanks; Technical Requirements	01/02/91	01/02/91 56 FR 24	This interim final rule delays for 270 days the requirements of 40 CFR §280.40(a)(3) for owners/operators to meet the specified lead rate (under specified conditions) with a probability of detection of 0.95 and a probability of false alarm of 0.05 on installed automatic line leak detectors on USTs.
40 CFR 280	Underground Storage Tanks Containing Petroleum; Financial Responsibility Requirements	10/31/90	10/31/90 55 FR 46022	This final rule amended the financial regulations under 40 CFR 280.91(d). This modification changed the compliance date, from October 26, 1990 to October 26, 1991, for obtaining financial assurance and added an additional requirement (280.91(e)) for local government entities. Under this new requirement, these entitles are required to comply with financial responsibility requirements within one year of publication of the final regulations.

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